Chapter Twenty

SPECIAL ENVIRONMENTAL STUDIES

BUREAU OF LOCAL ROADS AND STREETS MANUAL

Chapter Twenty
SPECIAL ENVIRONMENTAL STUDIES - Federal Funds

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20-1 GENERAL

20-1.01 Introduction

Although the *National Environmental Policy Act* (NEPA) is the major mandate for environmental considerations, there are other laws, executive orders, regulations, agreements, etc., which require special studies, analyses, coordination, and documentation on specific environmental issues. Chapter 20 discusses these special requirements for Federally funded projects. Chapter 26 of the *BDE Manual* provides additional information for each of the topics discussed in this Chapter.

As appropriate, impact analyses and related surveys, studies, and coordination made necessary by environmental laws and requirements other than NEPA shall be integrated with the development of environmental information for inclusion in environmental reports or Project Development Reports.

20-1.02 Topics

Special studies include the following:

- Environmental Surveys,
- Section 4(f) Evaluations,
- Section 6(f) Land Conversion Requests,
- OSLAD Land Conversion Requests,
- Historic Preservation Compliance Documentation,
- Noise Analyses,
- Flood Plain Findings,
- Wetlands Analyses,
- Threatened and Endangered Species/Natural Areas Impact Assessments,
- Evaluations of Farmland Conversion Impacts,
- Air Quality Conformity Documentation,
- Air Quality Microscale Analysis, and
- Special Waste.

20-1.03 Applicability

Many of the special environmental studies discussed in this Chapter are the result of Federal requirements. Although the Federally required analyses primarily affect Federally funded or regulated projects, some also may apply to State-only (or State and local) funded projects where the projects will affect resources regulated by the Federal government. In addition, several of the special analyses discussed are the result of State requirements that also apply to Federally funded projects. These State requirements are often more stringent than those at the Federal level, and they may potentially affect any Federally funded local agency project if the project involves the specific types of resources.

20-2 ENVIRONMENTAL SURVEYS

The environmental survey process initiates the review for cultural, biological, and wetland resources. Special waste screening is also done for local agency projects when the right-of-way is being acquired in the name of the State or the plans are being prepared by IDOT.

20-2.01 Applicability

Survey requests for cultural, biological, and wetland resources are required for Federally funded projects if any of the following criteria are met:

- involves acquisition of additional right-of-way or easements (temporary or permanent), or construction activities outside the existing right-of-way;
- requires a drainage structure runaround or any in-stream work (i.e., any work or other activity within the stream banks that modifies or otherwise affects the streambed or stream banks);
- potentially affects a recognized Illinois Natural Areas Inventory site or Illinois-dedicated Nature Preserve, a wetland, or a location where a State- or Federal-listed species is known to occur; or
- if a project does not require additional right-of-way, but does require cultural or biological resource coordination (e.g., a project is located within a historic district or in-stream work), an Environmental Survey Request (ESR) should be submitted to the district.

20-2.02 Environmental Survey Request

IDOT has developed a web page for environmental surveys. This page has links to the survey request forms and instructions, permitting the local agency or its consultant to transmit the forms electronically to the appropriate district office. The district will automatically be notified of a transmittal and will download the forms into the Project Monitoring Applications (PMA), which is used to track the environmental survey process. The local agency/consultant will submit a printed copy of the completed form with the required number of attachments to the district for processing. These submittals should be made as early as practical in project development.

The forms include the Environmental Survey Request (ESR), an Update Environmental Survey Request (UESR), an Addendum Environmental Survey Request (AESR), and an Update Addendum Environmental Survey Request (UAESR). The ESR form should only be used for the first submittal of a project. An AESR is only necessary when changes in a project will affect areas outside the limits of the previous survey or if there is a change in project scope that could involve additional resources. A UESR or UAESR is submitted to request additional types of surveys for the same project. The UESR, AESR, and UAESR will require the sequence number that was assigned to the ESR for the project.

The ESR, UESR, AESR, and UAESR consist of two pages. The first page is the project information. This is needed for all submittals including the submission of a Wetland Impact

Evaluation (WIE) or wetlands delineation. The second page is for special waste screening. For local projects, the special waste-screening page is only completed when the criteria in the instructions are met; see Section 20-12.

The local agency or their consultant is required to send attachments with the ESR forms to the district. These attachments should include a map clearly showing the location of the project, preliminary plan sheets showing the existing and proposed right-of-way or easement lines, and photos of the project area. Six copies of the ESR form and attachments should be submitted for federal projects and four copies for non-federal projects.

If an AESR is submitted, the preliminary plan sheets should clearly differentiate between the existing right-of-way line, the proposed right-of-way and easements that were cleared on the original ESR, and the proposed right-of-way and easements in the addendum.

For local agencies and consultants who do not have Internet access, paper copies of the ESR and AESR forms and instructions can be obtained from the district.

20-3 SECTION 4(F) EVALUATIONS

20-3.01 Introduction

A Section 4(f) Evaluation is a Federal requirement that applies only to projects involving funding and an approval or permit from an agency of the US Department of Transportation (USDOT). Section 4(f) applies to any significant publicly owned public park, recreation area, wildlife and waterfowl refuge, or any land from an historic site of national, state, or local significance. These properties and their significance are documented in a Section 4(f) Evaluation during project development, addressing alternatives, measures to minimize any harm, and net benefits that would result from the use of Section 4(f) land.

20-3.02 Legal Authority

49 USC 303, commonly known as Section 4(f) of the *Department of Transportation Act of 1966* (Public Law 89-665), provides that the Secretary of the US Department of Transportation:

> *. . . may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge, or land of a historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, recreation area, refuge, or site) only if:*
>
> *(1) there is no feasible and prudent alternative to using that land; and*
>
> *(2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.*

20-3.03 Applicability

When Section 4(f) lands are involved, the specific applicability to a given action is based on regulatory criteria and interpretations, both by the courts and by agencies of the USDOT. FHWA regulatory criteria for applicability of Section 4(f) are stipulated in 23 CFR 771.135. Information concerning various interpretations that have been made regarding specific types of Section 4(f) resources and project actions is presented in the Section 4(f) Applicability/Q&A in the FHWA Section 4(f) Policy Paper (March 1, 2005). This policy paper and any revisions may be accessed at www.environment.fhwa.dot.gov/projdev/4fpolicy.htm. Where applicability questions arise that are not addressed by the FHWA regulatory criteria and/or interpretations that have been issued, the matter should be discussed with the Central BLRS and the responsible USDOT agency (in most cases the FHWA) as early as practical in the development of the action involved. The final determination of Section 4(f) applicability will be made by the responsible USDOT agency.

Where there is a question concerning applicability of Section 4(f) to a specific resource involvement, any determination that Section 4(f) does not apply should be appropriately documented (e.g., a reference to a previously issued determination by the FHWA, a copy of a project-specific letter from the FHWA, a copy of meeting minutes, a memorandum to the files documenting discussions of the issue with the FHWA) in the Project Development Report or environmental document, and in the project files. This documentation should include, as appropriate, evidence of the views of the official having jurisdiction over the Section 4(f) resource.

20-3.04 Definitions

1. Section 4(f) Land. Land protected under 49 USC 303 Section 4(f) of the *USDOT Act* of *1966*; i.e., any significant publicly owned public park, recreational area, or wildlife and waterfowl refuge; and any land from a historic site of national, State, or local significance as determined by the Federal, State, or local officials having jurisdiction over the park, recreational area, refuge or site. The term "historic site" includes both historic and prehistoric archaeological sites determined important for preservation in place.

2. Section 4(f) Evaluation. This is documentation of a project involving Section 4(f) land, addressing alternatives to use this land and mitigation measures that minimize any harm resulting from the proposed use.

3. Section 4(f) Approval. A finding that there is no feasible and prudent alternative to use other than the proposed Section 4(f) land and that all possible planning to minimize harm to Section 4(f) land is included in the proposed action.

4. Programmatic Section 4(f) Evaluation and Approval. An expedited evaluation and approval process, which addresses particular types of projects that involve the use of Section 4(f) land (e.g., independent walkway or bikeway construction projects). When studies and coordination with the officials having jurisdiction over the 4(f) resource indicate an action will conform to the requirements and conditions of a programmatic evaluation and approval, the processing of an individual Section 4(f) Evaluation document for that action is not required.

5. Use. For Section 4(f), use occurs (a) when land from a Section 4(f) site is permanently incorporated into a transportation project, (b) when there is a temporary occupancy of land that is adverse in terms of the preservationist purposes of Section 4(f), or (c) when the proximity impacts of a transportation project on a Section 4(f) site, without acquisition of land, are so great that the purposes for which the Section 4(f) site exists are substantially "impaired" (normally referred to by courts as a "constructive use"). See 23 CFR 771.135(p) and Section 4(f) Q&A Question #1 for further discussion concerning "use" under Section 4(f).

6. Significance. A publicly owned park, recreation area, or wildlife and waterfowl refuge must be a "significant" resource in order for Section 4(f) to apply. Resources are considered significant unless the official having jurisdiction concludes that the entire site is not significant. The FHWA must make an independent evaluation of significance. For purposes of Section 4(f), historic significance is based on whether a historic site is included on or eligible for inclusion on the National Register of Historic Places. Only those historic sites included on or eligible for inclusion on the National Register are subject to Section 4(f), unless the FHWA determines that the application of Section 4(f) is otherwise appropriate.

20-3.05 Section 4(f) Evaluation

20-3.05(a) Development

Each Section 4(f) Evaluation includes a draft and final evaluation. A separate Section 4(f) involvement must be prepared for each location within a proposed project where use of Section 4(f) land is involved. The draft evaluation addresses avoidance alternatives, and the final evaluation addresses the selected alternative that involves the use of Section 4(f) land, as appropriate.

The FHWA Division Office has the responsibility for giving Section 4(f) approval. Projects meeting certain criteria may be approved by use of a Programmatic Section 4(f) Evaluation that streamlines the process with the various responsible agencies. Section 20-3.07 describes the Programmatic Section 4(f) Evaluation process.

20-3.05(b) Draft Evaluation Format

For categorical exclusion projects, the Section 4(f) Evaluation is processed as a separate document.

For an EIS or EA, the information should be placed in a special section of the environmental document labeled "Section 4(f) Evaluation." The following format is recommended for the Section 4(f) Draft Evaluation:

- Cover Sheet,*
- Table of Contents,*
- Description of Proposed Action,
- Description of Section 4(f) Property(ies),
- Impacts on the Section 4(f) Property(ies),
- Avoidance Alternatives,
- Measures to Minimize Harm,
- Net Benefits, and

- Section 4(f) Coordination.

* *These parts are needed only where the Section 4(f) Evaluation is prepared as a separate document*.

20-3.05(c) Draft Evaluation Content

The following will apply to the contents of a Section 4(f) Draft Evaluation:

1. Cover Sheet. The suggested format and content for a Section 4(f) Draft Evaluation cover sheet is presented in Figure 20-3A.

2. Table of Contents. The Table of Contents should provide the title and page numbers for each major section and subsection of the Evaluation. Maps, charts, tables, etc., should have separate listings in the Table of Contents.

3. Proposed Action. Where a separate Section 4(f) evaluation is prepared, describe the proposed project and explain the purpose and need for the project. When more than one alternative is under consideration, discuss each alternative requiring the use of Section 4(f) land.

4. Section 4(f) Property. Describe each Section 4(f) resource that would be used by any alternative under consideration. Provide the following information:

    a. a detailed map or drawing of sufficient scale to identify the relationship of the alternatives to the Section 4(f) property;

    b. size (acres (hectares) or ft^2 (m^2)) and location (maps or other exhibits (e.g., photographs, sketches) of the affected Section 4(f) property;

    c. ownership (e.g., city, county, State) and type of Section 4(f) property (e.g., park, recreation, historic);

    d. function of, or available activities on, the property (e.g., ball playing, swimming, golfing);

    e. description and location of all existing and planned facilities (e.g., ball diamonds, tennis courts);

    f. access (e.g., pedestrian, vehicular) and usage (approximate number of users/visitors, etc.);

    g. relationship to other similarly used lands in the vicinity;

    h. applicable clauses affecting the ownership (e.g., lease, easement, covenants, restrictions, conditions (including forfeiture)); and

i. unusual characteristics of the Section 4(f) property (e.g., flooding problems, terrain conditions, other features) that either reduce or enhance the value of all or part of the property.

5. Impacts on the Section 4(f) Property. Discuss the impacts on the Section 4(f) property for each alternative (e.g., amount of land to be used, facilities and functions affected, noise, air pollution, visual).

6. Avoidance Alternatives. Identify and evaluate location and design alternatives that would avoid the Section 4(f) property. Generally, this would include alternatives to either side of the property. The design alternatives should be in the immediate area of the property and consider minor alignment shifts, a reduced facility, retaining structures, etc., individually or in combination, as appropriate.

7. Measures to Minimize Harm. Discuss all possible measures that are available to minimize the impacts of the proposed action on the Section 4(f) land.

8. Net Benefits. Discuss how the measures to minimize harm and the mitigation incorporated into the project results in overall enhancement of the Section 4(f) property when compared to the do nothing and avoidance alternative.

9. Coordination. Discuss the results of preliminary coordination with the public official having jurisdiction over the Section 4(f) property and with regional (or local) offices of Department of Interior (DOI) and, as appropriate, the US Department of Agriculture (USDA), the Regional Office of Housing and Urban Development (HUD), and the Forest Supervisor of the affected National Forest. Generally, the coordination should include a discussion of avoidance alternatives, impacts to the property, measures to minimize harm, and net benefits. In addition, the coordination with the public official having jurisdiction should include, where necessary, a discussion of significance and primary use of the property.

(Route, Termini, City or County, and State)

DRAFT (FINAL) SECTION 4(f) EVALUATION
Submitted Pursuant to 49 USC 303
by the

US Department of Transportation
Federal Highway Administration

and

Illinois Department of Transportation
and
(Local Agency)

Date of Approval

For FHWA

The following persons may be contacted for additional information concerning this document:

(Name)
Division Administrator
Federal Highway Administration
3250 Executive Park Drive
Springfield, Illinois 62703-4514
Telephone: 217-492-4640

(Name, office address, and phone number of Regional Engineer)

Include a one-paragraph abstract of the Evaluation indicating project type, length, etc., here.

Comments on this Draft Evaluation are due by (*date*) and should be sent to (*name and office address of Regional Engineer*).*

**To be used on the Draft Evaluation only*.

COVER SHEET FORMAT
(Separate Section 4(f) Evaluation)

Figure 20-3A

20-3.05(d) Final Evaluation

When the preferred alternative uses Section 4(f) land, a final Section 4(f) Evaluation must be prepared. If the Section 4(f) Evaluation is a separate document, appropriate changes should be made in the Cover Sheet and Table of Contents to reflect that it is a Final Evaluation. In addition to the information in the Section 4(f) Draft Evaluation, the Section 4(f) Final Evaluation should include the following information:

1. Alternatives. A discussion of the basis for concluding that there are no feasible and prudent alternatives to the use of the Section 4(f) land. The supporting information must demonstrate that "*there are unique problems or unusual factors involved in the use of alternatives that avoid these properties or that the cost, social, economic, and environmental impacts, or community disruption resulting from these alternatives reach extraordinary magnitudes*" (23 CFR 771.135(a)(2)). This language should appear in the document together with the supporting information.

2. Planning Actions. A discussion of the basis for concluding that the proposed action includes all possible planning to minimize harm to the Section 4(f) property. When there are no feasible and prudent alternatives that avoid the use of Section 4(f) land, the final Section 4(f) Evaluation must demonstrate that the preferred alternative is a feasible and prudent alternative with the least harm; or provides a net benefit on the Section 4(f) resources after considering mitigation to the Section 4(f) resources.

3. Coordination. A summary of the appropriate formal coordination with the Headquarters Offices of DOI (and/or appropriate agency under that Department) and, as appropriate, the involved offices of USDA and HUD.

4. Comments. Copies of all formal coordination comments and a summary of other relevant Section 4(f) comments received and an analysis and response to any questions raised. Where Section 6(f) land is involved, document the National Park Service's position on the land transfer.

5. Concluding Statement. Include a concluding statement as follows: "Based upon the above considerations, there is no feasible and prudent alternative to the use of land from the (identify Section 4(f) property) and the proposed action includes all possible planning to minimize harm to the (Section 4(f) property) resulting from such use."

20-3.06 Coordination and Processing

The Section 4(f) Draft Evaluation must be circulated for review. The Department of Interior (DOI) should receive seven copies of the Section 4(f) Draft Evaluation for coordination. In addition to coordination with DOI, Section 4(f) Draft Evaluations must be coordinated with the officials having jurisdiction over the Section 4(f) property as well as HUD and USDA, where these agencies have an interest in or jurisdiction over the affected Section 4(f) resource (23 CFR 771.135(i)). The point of coordination for HUD is the appropriate Regional Office and for USDA, the Forest Supervisor of the affected National Forest. One copy should be provided to

the officials with jurisdiction of the Section 4(f) property and two copies should be submitted to HUD and USDA when coordination is required. The minimum period of time for receipt of comments is 45 days. DOI should also receive seven copies of the Section 4(f) Final Evaluation for information.

Comments received as a result of coordinating the Section 4(f) Evaluation must be given careful consideration. If the selected alternative requires the use of Section 4(f) land, the IDOT District Office and the FHWA Division Office must ensure that the EA/FONSI, the Final EIS, or Section 4(f) Final Evaluation includes sufficient information to fully support Section 4(f) approval.

20-3.07 Programmatic Section 4(f) Evaluations and Approvals

Appendix A of the *BDE Manual* includes the Programmatic Section 4(f) Evaluations for the following:

- historic bridges;
- minor involvements with public parks, recreations lands, and wildlife and waterfowl refuges;
- minor involvements with historic sites;
- independent bikeway or walkway construction projects; and
- projects that have a net benefit [(1)].

Note: 1. The Programmatic 4(f) Evaluation for projects that have a net benefit is available at www.environment.fhwa.dot.gov/projdev/4fnetbenefits.htm.

Uses of Section 4(f) land covered by a Programmatic Section 4(f) Evaluation shall be documented and coordinated as specified in the applicable Programmatic Evaluation. Where Section 4(f) approval is given under a Programmatic Evaluation, a copy of the approval documentation should be included in the Project Development Report or environmental report for the action. Figure 20-3B presents the recommended format for the Cover Sheet (and approval documentation) for a Programmatic Section 4(f) Evaluation submittal. The recommended Cover Sheet format includes a paragraph that identifies which Programmatic Section 4(f) Evaluation is being used. This paragraph includes a space for entering the date on which the Programmatic Section 4(f) Evaluation was approved. For use of the Programmatic Section 4(f) Evaluations on minor involvements, the “issued on” date, indicated at the end of each, should be entered as the “approved on” date in the Cover Sheet paragraph. For use of the Programmatic Section 4(f) Evaluation on bikeway/walkway projects, enter May 23, 1977 in the Cover Sheet paragraph; the date that the Programmatic Section 4(f) Evaluation was originally approved and issued.

[Project Information
(e.g., FAP number, termini, location)]

SECTION 4(f) APPROVAL

US Department of Transportation
Federal Highway Administration

The Federal Highway Administration (FHWA) has determined that this project meets all requirements for processing under the nationwide Programmatic Section 4(f) Evaluation for [*historic bridges; bikeways; publicly owned parks, recreational lands, or wildlife and waterfowl refuges; or historic sites*] approved on [(*date*)]. This determination is based on the attached documentation which has been independently evaluated by FHWA and determined to adequately and accurately discuss the Section 4(f) considerations on this project. Accordingly, FHWA gives Section 4(f) approval under the nationwide Section 4(f) Evaluation for [*(AlternativeX)]*, which uses land from [*(resource name)*].

Date

For Federal Highway Administration

Note: Where brackets are used, select the proper evaluation or fill in the proper information.

COVER SHEET FORMAT
(Programmatic Section 4(f) Evaluation)

Figure 20-3B

20-4 LAND CONVERSION REQUESTS

20-4.01 Section 6(f) Requests

Special procedures are required when lands that have Land and Water Conservation (LAWCON) funds involved in their purchase or development will be used for highway purposes. Section 10-1.03 discusses these procedures. Similar procedures may be required where lands are involved that have been improved or developed with funds under Section 1010 of the *Urban Park and Recreation Recovery Act of 1978*. Specific procedural requirements will be addressed on a case-by-case basis.

20-4.02 OSLAD Requests

Special procedures are required when lands that have Open Space Land Acquisition and Development (OSLAD) grant program funds involved in their purchase or development and will be converted to uses other than public outdoor recreational use. For guidance on OSLAD requests, see Section 10-1.04.

20-5 HISTORIC PRESERVATION COMPLIANCE DOCUMENTATION

20-5.01 Introduction

In the development of a Federally funded or regulated project, it is necessary to consider the effects of the undertaking on properties included in, or eligible for inclusion in, the National Register of Historic Places. Where these properties will be affected, the Advisory Council on Historic Preservation (ACHP) must be afforded a reasonable opportunity to comment on the undertaking prior to project approval.

20-5.02 Legal Authority

The following legal authority regulates or influences the policies and procedures for Section 106 documentation:

- 16 USC 470f, Section 106 of the *National Historic Preservation Act of 1966*, as amended.
- 16 USC 470h-2, Section 110(f) of the *National Historic Preservation Act of 1966*, as amended.
- Executive Order 11593, Protection and Enhancement of the Cultural Environment.

Appendix C in Part III "Environmental Procedures" of the *BDE Manual* briefly describes each of these.

20-5.03 Applicability

The procedures described in Section 20-5 apply to all Federally funded/regulated highway projects that may result in changes in the character, setting, or use of a historic property.

20-5.04 Policy

In the development of a proposed Federally funded or regulated project, appropriate measures must be taken to evaluate the undertaking's effect on properties included in, or eligible for inclusion in the National Register of Historic Places. Where these properties will be affected, the Advisory Council on Historic Preservation must be given a reasonable opportunity to comment prior to project approval. Special efforts must be made to minimize harm to any National Historic Landmark that may be directly and adversely affected by a proposed Federally funded or regulated undertaking.

20-5.05 Definitions

The following definitions apply to historic preservation:

1. Area of Potential Effects. The geographic area or areas within which an undertaking may cause changes in the character or use of historic properties, if these properties exist.

2. Council. The Advisory Council on Historic Preservation or a Council member or employee designated to act for the Council.

3. Historic Property. Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register. This term includes, for the purposes of these regulations, artifacts, records, and remains that are related to and located within these properties. The term "eligible for inclusion in the National Register" includes properties formally determined as such by the Secretary of the Interior and all other properties that meet National Register listing criteria.

4. Indian Tribe. The governing body of any Indian tribe, band, nation, or other group that is recognized as an Indian tribe by the Secretary of the Interior and for which the United States holds land in trust or restricted status for that entity or its members.

5. Interested Person. Those organizations and individuals that are concerned with the effects of an undertaking on historic properties.

6. Local Government. A county, township, municipality, or other general purpose political subdivision of a State.

7. National Historic Landmark. A historic property that the Secretary of the Interior has designated as a National Historic Landmark.

8. National Register. The National Register of Historic Places maintained by the Secretary of the Interior.

9. National Register Criteria. The criteria established by the Secretary of the Interior for use in evaluating the eligibility of properties for the National Register.

10. State Historic Preservation Officer (SHPO). The official appointed or designated pursuant to Section 101(b)(1) of the *National Historic Preservation Act* to administer the State historic preservation program or a representative designated to act for the SHPO. The SHPO for Illinois is the Director of the State Historic Preservation Agency, or their designee.

11. Undertaking. Any project, activity, or program that can result in changes in the character or use of historic properties, if any historic properties are located in the area of potential effects. The project, activity, or program must be under the direct or indirect jurisdiction of a Federal agency, or licensed or assisted by a Federal agency. Undertakings include new and continuing projects, activities, or programs and any of their elements not previously considered under Section 106.

20-5.06 Development

The following guidance reflects the assumption that FHWA, in most cases, will be the lead Federal agency for a project subject to the Section 106 requirements. If a different Federal agency is the lead (e.g., USACE for a local- or State-funded project requiring a Section 404 permit), that agency would fulfill the functions indicated for FHWA:

1. Identification. Identify historic properties in the area of potential effects of a proposed highway undertaking as early as practical in the development of the project. Properties may be identified from listings of the National Register and eligible properties published by the Keeper of the National Register (e.g., in the Federal Register); from local (e.g., county, city) inventories of historic sites; through coordination with the State Historic Preservation Officer (SHPO) or local historic groups; through field investigations (e.g., conducted as part of the IDOT "Integrated Process for Environmental Surveys, Studies, and Associated Preliminary Coordination"); or for a list of historic bridges in Illinois, see IDOT's website.

2. No Sites Identified. If no historic properties are found, provide documentation to the SHPO. Ordinarily, the documentation will consist of the Environmental Survey Request form for the project on which the results of the survey will be indicated. Coordination of this information with the SHPO will be accomplished by BDE. A copy of the response from the SHPO, if any, will be returned to the district. Persons and parties known to be interested in the undertaking and its possible effects on historic properties should be notified of the finding. For some project types, agreements with the SHPO and the Federal Highway Administration permit BDE to issue an "in-house" clearance on historic properties without the need for field surveys or project-specific coordination with the SHPO. For these projects, the Cultural Resources form, from the Project Monitoring application (PMA) with the "Cleared for Design Approval" and "Cleared for Letting" date field completed, constitutes the necessary documentation of Section 106 compliance. A copy of the PMA screen will be sent to the local agency by the district and will be placed in the ECAD, EA, and/or PDR. The agreement also allows that no survey request needs to be submitted on some projects.

3. Potential Sites Identified. If sites, buildings, structures, or objects are identified in the area of potential effects of an undertaking for which the National Register eligibility status has not been determined, appropriate information must be coordinated with the SHPO and, as appropriate, the Keeper of the National Register (in the US Department of Interior) for a determination of eligibility. This coordination ordinarily will be accomplished by BDE. In most cases, the information needed for the eligibility determination will be obtained through the studies conducted in response to the submittal of the Environmental Survey Request form for the undertaking. Where additional information is needed, BDE may request the assistance of the local agency in obtaining specific items of information.

4. Determining Effect. For all historic properties in the area of potential effects of a highway undertaking, the effects of the undertaking must be assessed. This assessment will be based on the Criteria of Effect and Adverse Effect (see Section 26-5 of the *BDE Manual*, developed by the Advisory Council on Historic Preservation (ACHP)).

5. "No Effect" Finding. If it is determined that the undertaking will have no effect on historic properties, BDE will provide documentation of this finding, ordinarily a letter and the results of the Cultural Resources portion of the environmental survey, to the SHPO and to interested persons who have made their concerns known. Unless the SHPO objects within 30 days of receiving this notice, no further actions are required for Section 106 compliance. If the SHPO provides a written response concurring in the no-effect finding, the district will provide a copy to the local agency.

6. Determining Adverse Effect. If an effect on a historic property is found, or if the SHPO objects to a no-effect finding, the effect must be evaluated under the Criteria of Adverse Effect; see Section 26-5 of the *BDE Manual*. In addition, the public and interested persons must be afforded notice of the opportunity to comment on any project affecting a site on or eligible for the National Register. Local agencies may accomplish this notification as part of the announcements for public involvement activities or the public availability of environmental documents for comment, or through publication of a separate notice specifically for that purpose. The announcement or notice should include a statement to the effect that:

> *In accordance with the National Historic Preservation Act, the views of the public and interested persons are being sought regarding the effect of the project on [list the specific National Register or eligible property(ies) involved] which is included on [or eligible for inclusion on] the National Register of Historic Places.*

This published notice will be in addition to any other direct contacts the local agencies may have with the public or interested persons to obtain their views regarding the project's effect on historic resources. Any views received in response to the notification should be considered and documented in the Section 106 compliance information.

7. Finding of No Adverse Effect. If the effect is not considered adverse under the Criteria of Adverse Effect, BDE will coordinate this finding with the SHPO. The following outcomes may occur:

- If, within 30 days, the SHPO concurs in the finding, BDE will notify ACHP, via the FHWA, and will provide summary documentation (i.e., the information that was coordinated with the SHPO) to support the finding.
- If the SHPO does not concur in the finding, BDE will submit documentation of the Finding of No Adverse Effect to ACHP, via the FHWA, for a 30 day review period and will notify the SHPO.

- If the ACHP does not object to the Finding of No Adverse Effect within 30 days of receipt of notice, or if ACHP objects but proposes changes that are accepted (by IDOT and FHWA), no further steps are required in the Section 106 process other than to comply with any agreement with the SHPO or ACHP concerning the undertaking.
- If the ACHP objects to the Finding of No Adverse Effect or changes proposed by the ACHP, if any, are not accepted, then the effect will be considered adverse.

The purpose of Section 106 documentation is to provide sufficient information to explain how the Finding of No Adverse Effect was determined. The required documentation is as follows:

- a description of the undertaking including photographs, maps, and drawings, as necessary;
- a description of historic properties that may be affected by the undertaking;
- a description of the efforts used to identify historic properties;
- a statement of how and why the criteria of adverse effect were found inapplicable; and
- the views of the SHPO, affected local governments, Indian tribes, Federal agencies, and the public, if any were provided, and a description of the means employed to solicit those views.

8. Adverse Effect Finding. If an adverse effect on historic properties is found, BDE will notify the ACHP, via the FHWA (except in cases where the ACHP has objected to a Finding of No Adverse Effect), and will initiate consultation in cooperation with the Central BLRS, the district, and the local agency to seek ways to avoid or reduce the effects on historic properties. The SHPO or IDOT/FHWA may request the ACHP to participate. The ACHP may participate in the consultation without this request. Interested persons will be invited to participate as consulting parties when they so request. Members of the public also shall have an opportunity to receive information and express their views. BDE will provide each of the consulting parties' documentation of the Finding of Adverse Effect.

The required documentation, provided by the local agency, for a finding of "Adverse Effect" is as follows:

- a description of the undertaking including photographs, maps, and drawings, as necessary;
- a description of the efforts to identify historic properties;
- a description of the affected historic properties, using materials already compiled during the evaluation of significance, as appropriate; and
- a description of the undertaking's effects on historic properties.

9. Memorandum of Agreement. If IDOT/FHWA and the SHPO agree upon ways to avoid or reduce adverse effects, or agree to accept these effects, they must execute a Memorandum of Agreement (MOA). Ordinarily, BDE will prepare the MOA in consultation with the local agency, district, Central BLRS, FHWA, and SHPO. When the ACHP participates in the consultation, it will execute the MOA with the local agencies, IDOT/FHWA, and the SHPO. When the ACHP has not participated in consultation, BDE will submit, via the FHWA, the MOA, with appropriate documentation; see Section 26-5 of the *BDE Manual*. As appropriate, IDOT/FHWA, SHPO, and ACHP, if participating, may agree to invite other parties to concur in the Agreement.

When IDOT/FHWA submits an MOA and related documentation to the ACHP, the ACHP will have 30 days from receipt to review it. Before this review period ends, ACHP will:

- accept the MOA, which concludes the Section 106 process;
- advise IDOT/FHWA of changes to the MOA to make it acceptable; subsequent agreements by IDOT/FHWA, the SHPO, and ACHP conclude the Section 106 process; or
- decide to comment on the undertaking, in which case, the ACHP will provide its comments within 60 days of receiving the submittal from IDOT/FHWA, unless IDOT/FHWA agrees otherwise.

When an MOA is submitted for review, the documentation, in addition to that specified in the "Finding of Adverse Effect", will also include a description and evaluation of any proposed mitigation measures or alternatives that were considered to address the undertaking's effects and a summary of the views of the SHPO and any interested persons.

When an MOA becomes final, the undertaking must be implemented according to the terms of the Agreement. This evidences fulfillment of Section 106 responsibilities. Failure to implement the terms of an MOA requires that the undertaking be resubmitted to the ACHP for comment.

10. Request for Comments. Where IDOT/FHWA and the SHPO cannot agree upon measures to avoid or reduce adverse effects nor agree to accept these effects, BDE will request, via the FHWA, the ACHP's comments and provide documentation for a Request for Comments When There is No Agreement; see Section 26-5 of the *BDE Manual*.

When the ACHP has commented on an undertaking, the comments will be considered by IDOT/FHWA in reaching a final decision on the proposed undertaking. BDE will report, via the FHWA, the decision to the ACHP prior to initiating the undertaking, if possible.

11. Discovery During Construction. Where historic properties are discovered during construction, the Central BLRS should be contacted for guidance concerning the specific actions necessary for compliance.

12. Documentation in Environmental Report. The results of compliance actions under Section 106 will be summarized in the environmental report for the action.

20-5.07 Section 106 Programmatic Agreement for Transportation Enhancement Projects

The Section 106 Programmatic Agreement is an expedited process for transportation enhancement activities funded with Surface Transportation Program (STP) funds that fall within the following categories:

- acquisition of scenic easements and scenic or historic sites;
- scenic or historic highway programs;
- landscaping and other scenic beautification;
- historic preservation;
- rehabilitation and operation of historic transportation buildings, structures, or facilities, including historic railroad facilities and canals;
- preservation of abandoned railway corridors including the conversion and use thereof for pedestrian or bicycle trails;
- control and removal of outdoor advertising;
- archeological planning and research;
- mitigation of water pollution due to highway runoff; and
- facilities for pedestrians and bicycles.

The guidance provided in Section 20-5.06 remains the same with the exception of the “No Effect Finding” and “Finding of No Adverse Effect” procedures. For both steps, BDE will provide a written determination of the finding to the SHPO. The SHPO will provide written concurrence or comments within 15 days. If the district and the SHPO agree on the finding, BDE will document that finding, which will be available for public inspection, and proceed with the activity without further review by the ACHP.

The Section 106 Programmatic Agreement for Enhancement Projects can be obtained through the Central BLRS.

20-5.08 Documentation Requirements

The following discussion stipulates the documentation required for specific findings, agreements, or requests for comments in the Section 106 compliance process. For archaeological resources, BDE ordinarily will prepare the Section 106 compliance documentation, in cooperation with the local agency, Central BLRS, district, and the FHWA. For historic or architectural resources, the local agency ordinarily will prepare the documentation. See Section 20-5.06 for the documentation requirements.

20-5.09 Coordination

Coordination is conducted by BDE to comply with Section 106. Coordination primarily involves the FHWA, SHPO, the Keeper of the National Register, and ACHP. However, in the identification of historic properties and the evaluation of the effects of proposed undertakings on these properties, careful consideration should be given to information and views provided by contacts with:

- interested and affected persons;
- local governments;
- Indian tribes;
- public and private organizations; and
- applicants for or holders of grants, permits, or licenses and owners of affected lands.

When an adverse effect on historic properties is involved, these parties must be invited to participate in the Section 106 consultation process, if they request to be so involved.

20-5.10 Historic Bridge Memorandum of Understanding

For information on IDOT's Memorandum of Understanding with the FHWA, see Section 10-1.06.

20-6 NOISE ANALYSES

20-6.01 Introduction

In the development of a Federally funded project, it may be necessary to undertake special technical analyses to identify and evaluate the potential noise impacts that the project will involve. This topic prescribes procedures for these analyses and for noise abatement measures and related coordination, and it includes the noise abatement criteria prescribed by Federal regulations.

20-6.02 Legal Authority

The following legal authority regulates or influences the policies and procedures for noise analyses:

- 42 USC 4901-4918, commonly known as the *Noise Control Act of 1972* (Public Law 92-574).
- 23 USC 109(h) and (i), which are amendments to the *Federal-aid Highway Act of 1970* (Public Laws 93-87 and 91-605).
- 42 USC 4331 and 4332, which are portions of the *National Environmental Policy Act of 1969* (Public Law 91-190).
- 23 CFR Part 772 “Procedures for Abatement of Highway Traffic Noise and Construction Noise.”

20-6.03 Policy

Special efforts must be made in the development of a project to comply with Federal, State, and local requirements for noise control, to consult with appropriate officials to obtain the views of the affected community regarding noise impacts and abatement measures, and to mitigate highway-related noise impacts, where reasonable and feasible.

For detailed information, see the “Highway Traffic Noise Analysis and Abatement — Policy and Guidance,” by the US Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch, Washington D.C., June 1995.

20-6.04 Applicability

The noise analysis procedures described in this Section applies to all Type I and Type II projects; see Section 20-6.05 for definitions. For further information on noise analysis procedures and abatement measures, see Section 26-6 of the *BDE Manual*.

20-6.05 Definitions

The following definitions apply to noise analyses:

1. Existing Noise Level. The worst hourly noise level caused by existing conditions that occurs in a particular area on a regular basis. These conditions can result from any natural and mechanical sources, and human activity considered being usually present in a particular area.

2. Facility or Existing Highway. Any road or street on the highway system that falls under the jurisdiction of IDOT, county, road district, or municipality.

3. Future Noise Level. The worst hourly traffic noise level that will occur on a regular basis based on predicted traffic volumes within a 20 year period after the completion of construction of the new highway facility.

4. Noise Barrier. Any device which reduces the transmission of traffic noise from a highway to an adjacent receptor, including but not limited to:

    - earth berms,
    - walls made from timber,
    - masonry,
    - concrete,
    - composite materials, or
    - any combination of the above.

5. Noise Level. A measured quantity of sound (i.e., oscillations of pressure in the air). The unit of measure is the decibel (dB). In evaluating highway traffic noise for the FHWA noise abatement criteria, the measurement of decibels is weighted to focus on the frequencies that correlate with human subjective response (i.e., 1000 to 4000 Hertz (cycles per second)). This is referred to as “A-weighting,” and the A-weighted unit of measure is abbreviated as dBA.

6. Receptor. A listener located in an outdoor place where frequent human use occurs and a lowered noise level would be of benefit.

7. Representative Receptor. A site used to represent similar land uses. These sites should be chosen on the basis of having similar distances to the roadway and similar traffic volumes and operating conditions. In addition, these sites should be chosen to represent locations that would experience the maximum reduction in traffic noise levels as a result of abatement measures.

8. Residence. A household unit that is intended for occupancy as separate living quarters (e.g., house, apartment, group of rooms, single room).

9. Type I Project. A proposed Federally funded highway project that is either constructed on new or existing location that significantly changes either the horizontal or vertical alignment and/or increases the number of through-traffic lanes.

10. Type II Project. A proposed Federally funded highway project that is intended for noise abatement measures on an existing highway.

11. Undeveloped Lands. Those tracts of land or portions thereof that do not contain improvements or activities devoted to frequent human habitation or use (including low-density recreational use) and for which no improvements or activities are planned or programmed.

12. Worst Hourly Traffic Noise. The noise level resulting from the highest hourly volume that a facility can handle while maintaining stable flow. This traffic volume will be either the design hourly volume or the maximum volume that can be accommodated under Level of Service C (i.e., where high traffic volumes begin to restrict speed and drivers' maneuverability).

20-6.06 Procedures

20-6.06(a) Analysis and Reporting

The analysis and reporting of noise impacts must be accomplished in accordance with the following:

1. Traffic Noise Analysis. In the development of proposed Type I and Type II projects, expected traffic noise impacts must be determined and analyzed, and the overall benefits that can be achieved by noise abatement measures to mitigate these impacts will be determined, giving weight to any adverse social, economic, and environmental effects. The level of analysis may vary from simple calculations for rural and low-volume highways to extensive analysis for high-volume, controlled-access highways in urban areas. Noise abatement criteria are listed in Figure 20-6A.

2. Documentation in Reports. Although there may be instances in which a noise analysis is conducted independent of environmental documentation for a highway project (e.g., for Type II noise abatement projects), the analysis typically is conducted concurrently with the development of an EIS, EA, or other environmental report (or Project Development Report, where applicable). It is important that appropriate information from the technical noise study be made a part of the environmental documentation. Therefore, careful planning should be undertaken to ensure that the technical study reaches appropriate milestones in time to incorporate summaries of the noise analysis results into the environmental documentation for circulation and comments, as appropriate.

The technical report should be reviewed by the district or be submitted by the district to the Central BLRS so it can be forwarded to BDE for review.

3. Construction Noise. The following general steps for addressing construction noise will be performed for all Type I and Type II projects:

- Identify land uses or activities that may be affected by noise from construction of the project. This identification must be performed during the project development studies.
- Determine the measures recommended for inclusion in the contract plans and specifications to minimize or eliminate adverse construction noise impacts on the community. This determination includes a weighing of the benefits to be achieved and the overall adverse social, economic, and environmental effects and the costs of the abatement measures.
- Incorporate the recommended abatement measures into the contract plans and specifications.

The *IDOT Traffic Noise and Vibration Manual* provides technical information and technical procedures associated with the provisions of this topic. Its contents should be considered in complying with these procedures.

20-6.06(b) Coordination

Coordination with Metropolitan Planning Organizations (MPOs) and with local officials (within whose jurisdiction the highway project is located) will be undertaken for all Type I projects. The local agency will provide the following information to these organizations:

- approximate generalized future noise levels (for various distances from the highway improvement) for both developed and undeveloped lands or properties in the immediate vicinity of the project, and
- information that may be useful to local communities to protect future land development from becoming incompatible with anticipated highway noise levels.

Land Use Category	Leq(h)* (dBA)	Description of Land Use Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreational areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	Undeveloped lands.
E**	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

* "Leq(h)" – The hourly value of Leq. Leq is the equivalent, steady state sound level, which in a stated period of time contains the same acoustical energy as the time-varying sound level during the same period. For purposes of measuring or predicting noise levels, a receptor is assumed to be at ear height, located 5 ft (1.5 m) above ground surface.

** Use of interior noise levels shall be limited to situations where exterior noise levels are not applicable (i.e., where there are not exterior activities to be affected by traffic noise or where exterior activities are far from or physically shielded from the roadway in a manner that prevents an impact on exterior activities).

NOISE ABATEMENT CRITERIA
(Hourly Sound Level - decibels (dBA))

Figure 20-6A

20-7 FLOOD PLAIN FINDING (EXECUTIVE ORDER 11988)

20-7.01 Introduction

In the development of a Federally funded/regulated project, Executive Order 11988 imposes special requirements when the project will entail a significant flood plain encroachment. The following discussion explains the Executive Order 11988 requirements. These are in addition to IDNR Office of Water Resources flood plain permit requirements discussed in Chapter 7 and the special hydraulic analyses associated with determining structure openings and elevations for facilities located in flood plains discussed in Section 10-2.03.

A project that will involve a significant flood plain encroachment, as defined under the Executive Order 11988 requirements, will require the preparation of an EA or EIS.

20-7.02 Legal Authority

The following legal authority regulates or influences the policies and procedures for flood plains:

- Executive Order 11988, Flood Plain Management.
- US Water Resources Council's Flood Plain Management Guidelines for Implementing Executive Order 11988.
- US Department of Transportation Order 5650.2, Protection and Management of Flood Plains.
- Federal Highway Administration regulations on Location and Hydraulic Design of Encroachments on Flood Plains (23 CFR 650A).
- Title 92 IAC 708, implementing Sections 23, 29, and 30 of the *Rivers, Lakes, and Streams Act*, 615 ILCS 5/23, 29a, and 30.

See Appendix C of Part III "Environmental Procedures" of the *BDE Manual* for more information.

20-7.03 Policy

In the development of a Federally funded/regulated project, special efforts must be made to:

- encourage a broad and unified effort to prevent uneconomic, hazardous, or incompatible use and development of flood plains;
- avoid longitudinal encroachments, where practical;
- avoid significant encroachments, where practical;
- minimize impacts of actions that adversely affect base flood plains;
- restore and preserve the natural and beneficial flood plain values that are adversely impacted by local agency actions;

- avoid support of incompatible flood plain development; and
- be consistent with the intent of the Standards and Criteria of the National Flood Insurance Program, where appropriate.

20-7.04 Applicability

The following Sections discuss the procedures that apply to all Federally funded/regulated projects that will entail encroachment or which otherwise will affect base flood plains, except for repairs made with emergency funds during or immediately following a disaster. The assessment of flood plain encroachments should be incorporated into the development and analysis of design alternatives so that flood plain impacts will not be considered in isolation from other social, economic, environmental, and engineering considerations.

20-7.05 Definitions

The following definitions apply to floodplain findings:

1. Action. Any highway construction, reconstruction, rehabilitation, repair, or improvement undertaken for Federally funded/regulated projects.

2. Base Flood. The flood or tide having a 1% chance of being exceeded in any given year.

3. Base Flood Plain. The area subject to flooding by the base flood.

4. Encroachment. An action within the limits of the base flood plain. Generally, any increase in the 100-year-water-surface elevation produced by a longitudinal encroachment on a National Flood Insurance Program (NFIP) flood plain should not exceed the 1 ft (300 mm) allowed by the Federal NFIP standards and must be supported by the design risk assessment.

5. Longitudinal Encroachment. An action that is parallel to the channel and within the limits of the base flood plain.

6. Minimize. To reduce to the smallest practical amount or degree.

7. Natural and Beneficial Flood Plain Values. These include, but are not limited to fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, forestry, natural moderation of floods, water quality maintenance, and groundwater recharge.

8. Practical. Capable of being done within reasonable natural, social, or economic constraints.

9. Preserve. To avoid modification to the functions of the natural flood plain environment or to maintain it as closely as practical in its natural state.

10. Regulatory Floodway. The flood plain area that is reserved in an open manner by Federal, State, or local requirements (i.e., unconfined or unobstructed either horizontally or vertically) to provide for the discharge of the base flood so that the cumulative increase in water surface elevation is no more than a designated amount (not to exceed 1 ft (300 mm)) as established by the Federal Emergency Management Agency (FEMA) for Administering the National Flood Insurance Program.

11. Restore. To re-establish a setting or environment in which the functions of the natural and beneficial flood plain values adversely impacted by the highway agency action can again operate.

12. Risk. The consequences associated with the probability of flooding attributable to an encroachment. It will include the potential for property loss and hazard to life during the service life of the highway.

13. Significant Encroachment. A highway encroachment and any direct support of likely base flood plain development that would involve one or more of the following construction- or flood-related impacts:

- a significant potential for interruption or termination of a transportation facility which is needed for emergency vehicles or provides a community's only evacuation route,
- a significant risk, or
- a significant adverse impact on natural and beneficial flood plain values.

14. Support Base Flood Plain Development. To encourage, allow, serve, or otherwise facilitate additional base flood plain development. Direct support results from an encroachment; indirect support results from an action out of the base flood plain.

15. Transverse Encroachments. The network of the natural surface drainage system does not allow any alternative to transverse encroachments by a highway program. Therefore, it is essential that the design selected for transverse encroachments be supported by analysis of design alternatives with consideration given to capital costs, risk, and other site-specific factors. "Supported" means that the design is either shown to be cost-effective or justified on some other engineering basis. The analysis used to develop this support is referred to as a design risk assessment (see Section 20-7.06(b). Justification for the structure size selected for design must be documented in a Hydraulic Design Study Report and retained in the project file.

20-7.06 Procedures

The *IDOT Water Quality Manual* provides additional information and procedures to assist in fulfilling the requirements herein. The *IDOT Drainage Manual* discusses hydraulic analyses for flood plain encroachments.

20-7.06(a) Assessment and Documentation of Flood Plain Encroachments

When considering flood plain encroachments, projects are divided into six categories. This Section provides guidance on the appropriate assessment and documentation for the different categories of work. The Central BLRS or FHWA may require additional information on individual projects prior to environmental or design approval.

Assessments of flood plain encroachments may range from inspections resulting in certifying statements, as suggested in Categories 1 and 2, to a lengthy detailed analysis, as suggested in Category 6. Different levels of analysis have been established for different categories of projects depending upon their size, scope, and impact upon the flood plain. Each of the categories is based upon certain assumptions. If these assumptions are not totally accurate, the level of analysis should be modified so that sufficient information is contained to support the conclusions and recommendations.

A single highway improvement project may involve two or more of the categories listed below. When this occurs, it is necessary to include information in the Project Development Report (PDR) or environmental document to address each of the categories that may be involved. Each drainage structure on the proposed project must be addressed in the report and a determination made on the significance of any encroachments. If a given situation does not fit a category, these guidelines should be used as a basis for developing a reasonable approach to fit that situation.

The categories are the following:

Category 1. Projects that will not involve any work below the 100 year flood elevation. When the 100 year flood elevation is available from existing information without additional detailed analysis and it can be determined that certain projects (e.g., resurfacing, widening and resurfacing, bridge deck repairs) will not involve any work below the 100 year flood elevation, it should be sufficient to state in the PDR:

> *Although this project involves work within the horizontal limits of the 100 year flood plain, no work is being performed below the 100 year flood elevation and as a result this project does not encroach upon the base flood plain.*

Category 2. Projects that do not involve the replacement or modification of any drainage structures. Projects in this Category must be on an existing alignment. They may involve a change in the profile grade elevation of a magnitude normally associated with resurfacing. If a profile change is proposed, an inspection of the flood plain is required to determine if an increase will result in a significant change in damage or risks. It is assumed that there are no known drainage problems within the limits of the project or that other factors were considered to override the need for concurrent drainage improvements. The following information should be included in the PDR:

> *This project will not involve the replacement or modification of any existing drainage structures or the addition of any new drainage structures. As a result, this project will not affect flood heights or flood plain limits. This project will not result in any new, or increase the adverse effects of any existing, environmental impacts; it will not increase flood risks or damage; and it will not adversely affect existing emergency service or emergency evacuation routes; therefore, it has been determined that this encroachment is not significant.*

Category 3. Projects involving modification to existing drainage structures. Projects within this Category will not involve the replacement of any existing drainage structures or the construction of any new drainage structures. It is intended to apply only to those projects that modify existing structures (e.g., extending crossroad culverts, adding headwalls, extending existing bridge piers). Some projects involving modifications of existing drainage structures will affect flood heights and flood limits; however, these effects should be minimal. Some analysis may be necessary to support statements concerning the insignificance of the modifications. For example, if a number of culverts will be lengthened, a typical calculation addressing the worst-case situation should be included to demonstrate the magnitude of the expected changes in backwater elevations. In addition to calculations relative to changes in capacity of existing structures, an inspection of the flood plains should be made to determine if any expected increases in flood heights could result in a significant damage not expected under current conditions. An example of this might be an existing levee that will be overtopped by even a small increase in flood heights.

A statement similar to the following, together with a summary of appropriate analyses required to support conclusions therein, should be included in the PDR:

> *The modifications to drainage structures included in this project will result in an insignificant change in their capacity to carry floodwater. This change will cause a minimal increase in flood heights and flood limits. These minimal increases will not result in any significant adverse impacts on the natural and beneficial flood plain values; they will not result in any significant change in flood*

risks or damage; and they do not have significant potential for interruption or termination of emergency service or emergency evacuation routes; therefore, it has been determined that this encroachment is not significant.

Category 4. Projects involving replacement of existing drainage structures on existing alignment. This Category does not include those replacement projects that reduce the effective waterway opening from that which currently exists. In addition, there should be no record of drainage problems and no unresolved drainage complaints from residents in the area. The site should be inspected to determine if there are any existing conditions that would affect the usual design of the replacement structure. If these conditions are satisfied, a discussion similar to the following should be included in the PDR:

The proposed structure will have an effective waterway opening equal to or greater than the existing structure, and backwater surface elevations are not expected to increase. As a result, there will be no significant adverse impacts on natural and beneficial flood plain values; there will be no significant change in flood risks; and there will be no significant increase in potential for interruption or termination of emergency service or emergency evacuation routes; therefore, it has been determined that this encroachment is not significant.

When downstream flood heights are affected, the area should be inspected to determine if the anticipated increase could result in a significant impact. If no significant impacts are expected, that information should be added to the discussion in Category 4. If significant impacts are expected, the project should follow the guidelines in Category 5.

Category 5: Projects on new alignment and projects with potentially significant increases in 100 year flood water surface elevations. Projects in this Category are expected to require a hydraulic analysis to determine pipe size or waterway opening. If other factors cause consideration of a significant change to the pipe size or waterway opening of an existing structure, an analysis will be necessary to determine the resultant change in flood heights upstream and downstream, when appropriate. In either case, the expected change in water surface elevations must be calculated to first determine the appropriate level of assessment and then to make the assessment.

If the hydraulic analysis results in a finding that flood water surface elevations will not change, the PDR should contain a discussion similar to that suggested in Category 3. If a new alignment is involved, it will be necessary to discuss whether or not it is likely to support incompatible flood plain development. If support is anticipated, alternatives to that support must be discussed. New alignments will also require a determination of whether the roadway will be

overtopped more than once every 100 years. If yes, the frequency and its impact should be discussed in the PDR.

If the hydraulic analysis results in a finding that flood water surface elevations will increase either upstream or downstream, the area affected must be inspected to determine the potential for significant increases in flood impacts. The inspection should identify flood receptors that may experience significant adverse impacts as a result of the anticipated increase in flood heights. The impact on those receptors should be assessed and a summary of the types of receptors likely to be affected, and the degree of impact should be included in any PDR. Consultation with natural resource and flood plain management agencies should be initiated when necessary to adequately assess flood impacts. If significant adverse impacts are not predicted, the summary should be followed by a discussion similar to that suggested in the preceding paragraph and a determination that the encroachment is not significant.

If the assessment of impacts results in a prediction of significant adverse impacts on natural and beneficial flood plain values, significant increases in flood risks, or a significant increase in potential for interruption or termination of a transportation facility that is needed for emergency service or emergency evacuation routes, the encroachment should be considered significant and the guidelines in Category 6 followed.

When new alignments are classified as longitudinal encroachments, they should be analyzed to determine the resultant increase in flood heights, if any. The impact of the increase should be assessed in accordance with the preceding two paragraphs. In addition, the PDR and accompanying environmental documentation should evaluate and discuss alternatives to the longitudinal encroachment on the flood plain.

Category 6: Significant Encroachments. Any proposed project that encroaches on a flood plain, either transversely or longitudinally, and which is predicted to result in a significant adverse impact on natural and beneficial flood plain values, a significant increase in flood risk, or a significant increase in potential for interruption or termination of emergency service or emergency evacuation routes, must be accompanied by a complete hydraulic analysis, a risk analysis, a flood plain study (Section 20-7.06(b)), and a flood plain finding (Section 20-7.06(c)). When it is determined that encroachments are significant, an EIS or EA must be prepared. When significant transverse encroachments are proposed, the accompanying reports must include consideration of alternatives that do not include such encroachments. No significant encroachment will be approved unless there is no practical alternative.

The hydraulic analysis must provide the following information that must be summarized in the PDR:

a. For a 100-year flood frequency:

- discharge,
- backwater, and
- water surface elevation before and after proposed project.

b. For the design frequency (if other than 100 years):

- frequency,
- discharge,
- backwater,
- water surface elevation before and after proposed project, and
- waterway opening.

c. The frequency with which the highway is likely to be overtopped in 500 years or less. If over 500 years, it should be so stated. The location of the overtopping should be indicated.

The risk analysis should include an economic comparison of design alternatives using expected total costs (i.e., construction costs plus risk and damage costs) to determine the alternative with the least total expected cost to the public. The comparison includes probable flood-related costs during the service life of the facility for highway operation, maintenance, and repair; for highway-aggravated flood damage to other property; and for additional or interrupted highway travel.

The flood plain study will require an inspection of the flood plain to determine the increase in the number of flood receptors and the increase in the damage to present flood receptors that will result from the expected increase in flood heights. Consultation with natural resource and flood plain management agencies should be initiated where necessary to adequately assess encroachments. Following the inspection and consultation, the flood plains subsection of the appropriate environmental report should be prepared.

When significant encroachments are under consideration, public involvement notices published in the news media must indicate that encroachments are being considered. Identify all encroachments during presentations at public hearings or meetings.

20-7.06(b) Design Risk Assessment

Justification or "support" is achieved through the design risk process. The degree of support is to be commensurate with the sensitivity of each site, and will range from conducting an economic analysis to simply describing the constraint(s) that justifies the design.

An economic analysis is a monetary exercise that determines whether a proposed hydraulic structure is cost-effective by demonstrating that an appropriate balance exists between the capital costs and the risk costs attributable to the encroachment. This method of support should be used to the extent that existing risk is quantifiable. Risk is defined as the consequences associated with the probability of flooding attributable to an encroachment. It includes the potential for property loss and hazard to life during the design life of the highway.

An economic analysis demonstrating the cost-effectiveness of a design should include consideration for both the design frequency and the 100 year frequency. In some cases, even a lower frequency occurrence may have significant risk costs.

There are many projects where the optimum design is controlled by obvious economic, environmental, or physical constraints. In these situations, a description of the constraint with a statement explaining how the constraint justifies the design will be sufficient support for the design risk assessment. Some examples of constraints include:

- rehabilitation of existing structure (including superstructure replacement, deck replacement or repairs, widenings, and culvert extensions);
- extensive development adjacent to the flood plain;
- reservoir and dam crossing;
- channel stability problems;
- supercritical flow;
- roadway overtopping;
- minimum opening that spans the channel;
- smallest standard bridge design that does not exceed acceptable backwater;
- major ice or debris problems;
- flood control projects;
- topography (e.g., deep ravine);
- geometrics (e.g., navigation clearances);
- foundation problems;
- multiple-use structure (e.g., combination stream and grade separation structure, cattle pass); and

- environmental commitments (e.g., threat to endangered species, encroachment on historic sites, parks, recreation areas, wildlife and waterfowl refuges).

20-7.06(c) Flood Plain Studies

Special technical studies assessing the effect of any encroachment and determining the practicability of alternatives to significant encroachments and longitudinal encroachments, when applicable should be undertaken for all projects. The following should be considered when preparing these studies:

1. NFIP Maps. Use National Flood Insurance Program (NFIP) maps, if available, and other information developed by IDOT and/or local, State, or Federal water resources and flood plain management agencies to determine whether a highway location alternative will include an encroachment.

2. EO 11988. The intent of Executive Order 11988 can be satisfied for many actions without documenting the exact flood plain limits. The required determination of encroachments can be accomplished without detailed study.

3. Alternatives. Flood plain studies include evaluation and discussion of the practicability of alternatives to any longitudinal encroachments or to any significant encroachments or any support of incompatible flood plain development.

4. Scope of Discussion. Flood plain studies include a discussion of the following items, commensurate with the significance of the risk or environmental impact, for all alternatives containing encroachments, and for those actions that would support base flood plain development:

    - the risks (e.g., flooding risk) associated with implementation of the action;
    - the impacts on natural and beneficial flood plain values;
    - the support of probable incompatible flood plain development;
    - the measures to minimize flood plain impacts associated with the action; and
    - the measures to restore and preserve the natural and beneficial flood plain values impacted by the action.

5. Documentation. Summarize the flood plain studies in the project's Environmental Impact Statement (EIS), Environmental Assessment (EA), or Project Development Report. No documentation is needed for a Group I Categorical Exclusion.

20-7.06(d) Flood Plain Finding

A proposed action that includes a significant encroachment will not be approved unless the FHWA finds that the proposed significant encroachment is the only practical alternative. This finding is included in the recommendation for a FONSI or in a special subsection entitled "Only Practical Alternative Finding" within the Final EIS. This finding must be supported by the following information:

- a reference to Executive Order 11988 and 23 CFR 650, Subpart A;
- the reasons why the proposed action must be located in the flood plain;
- the alternatives considered and why they were not practical; and
- a statement indicating whether the action conforms to applicable State or local flood plain protection standards.

This finding must be included in the environmental report and forwarded to the appropriate State and local clearinghouses. The clearinghouse copies may be included in the appendix of the regular design stage contact.

20-7.06(e) Coordination

Local, State, and Federal water resources and flood plain management agencies, including the IDNR Office of Water Resources (OWR), should be consulted to determine if the proposed highway action is consistent with existing watershed and flood plain management programs, and to obtain current information on development and proposed actions in the affected watersheds.

20-8 WETLAND ANALYSES AND FINDINGS

20-8.01 Legal Authority

Federal Executive Order 11990 applies special requirements for addressing the impacts of Federal projects on wetlands. Wetlands also are subject to regulation under the *Clean Water Act* (33 USC 1251-1376) as a part of the Section 404 permit process and the Section 401 Water Quality Certification requirements (33 CFR Parts 320 through 330). In addition, the Illinois *Interagency Wetland Policy Act of 1989* (20 ILCS 830) and the implementing rules for the *Act* (17 IAC 1090) address State policy for wetlands, which is reflected in Section 10-1.05.

20-8.02 General

Section 10-1.05 provides the procedures for wetland analyses and documentation for all projects. For Federally funded projects, the submission of the Environmental Survey Request will initiate the identification and delineation process for wetlands by BDE at no cost to the local agency. The results will be sent to the local agency upon completion of the delineation by BDE. After the wetlands have been delineated in the project vicinity, the local agency will be required to prepare the Wetland Impact Evaluation form in accordance with Section 10-1.05(e). The local agency also has the option of having the delineation performed by a qualified consultant at the local agency's request. In all cases, at the time of submission of the ESR, it should be noted on the ESR whether the local agency or BDE will be responsible for performing the delineation.

20-9 THREATENED AND ENDANGERED SPECIES/NATURAL AREA IMPACT ASSESSMENTS

20-9.01 Introduction

In the development of a project, special studies and coordination are required when the action may affect Federally listed threatened or endangered species. This Section addresses the reporting and processing requirements for these actions.

20-9.02 Legal Authority

The *Federal Endangered Species Act* (50 CFR 402) is the legal authority that regulates or influences the policies and procedures for threatened and endangered species.

20-9.03 Policy

In the development of a project, an assessment shall be made on the likely impacts on species of plants or animals listed as threatened or endangered. Every effort will be made to minimize the likelihood of jeopardizing the continued existence of listed threatened or endangered species, or the destruction or adverse modification of a Natural Area, or an area of habitat that has been designated as a critical habitat or essential habitat. See Section 20-9.04 for the definition of critical and essential habitat.

20-9.04 Definitions

The following definitions apply:

1. Biological Assessment. Information on listed and proposed species and designated and proposed critical habitat that may be present in the action area and the evaluation of potential effects of the action on these species and habitat.

2. Biological Opinion. The document that states the opinion of the US Fish and Wildlife Service (USFWS) on whether or not an action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.

3. Critical Habitat. An area designated by the USFWS as critical habitat.

4. Destruction or Adverse Modification. A direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of listed species. Alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.

5. Essential Habitat. The habitat necessary to prevent the depletion of a threatened and/or endangered species.

6. Formal Consultation. A process between the USFWS and the Federal agency responsible for a proposed action that commences with the Federal agency's written request for consultation and concludes with the USFWS issuance of a biological opinion.

7. Jeopardize the Continued Existence. To engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.

8. Listed Species. Any species of fish, wildlife, or plant that has been determined to be endangered or threatened pursuant to the *Federal Endangered Species Act*.

9. Proposed Species. Any species of fish, wildlife, or plant that is proposed to be listed under Section 4 of the *Federal Endangered Species Act*.

20-9.05 Federal Requirements

20-9.05(a) Applicability

The preparation of a Biological Assessment is required for any Federally funded/regulated "major construction activity" where listed species or critical habitat may be present in the action area. A Biological Assessment also may be appropriate for other actions where listed species or critical habitat may be present and it is unclear whether they may be affected. If they may be affected, formal consultation is required.

20-9.05(b) Processing Procedures

As a part of the environmental survey and coordination process for a proposed undertaking, BDE will evaluate affected habitat in the action area and, as appropriate, will either:

- request from the USFWS information concerning any listed or proposed species, or designated or proposed critical habitat, that may be present in the action area; or
- provide the USFWS with written notification of species and critical habitat that has been determined, on the basis of surveys or available information, to be potentially present in the action area.

In response to the contact from BDE, the USFWS will:

- provide information regarding listed or proposed species or designated or proposed critical habitat that may be present in the action area, and a list of candidate species* that may be present in the action area;
- concur with or revise the information provided by BDE; or
- where a list is not provided, advise whether, based on the best scientific and commercial data available, any listed or proposed species or designated or proposed critical habitat may be present in the action area.

If, as a result of the coordination with the USFWS, a determination is made that no listed species or critical habitat may be present, a Biological Assessment is not required. In these cases, further consultation with the USFWS on listed species or critical habitat also is not required. If it is determined that only proposed species or proposed critical habitat may be present, a Biological Assessment is not required unless the proposed listing and/or designation become final before the action is completed.

If the coordination with the USFWS results in a determination that listed species or critical habitat may be present, a Biological Assessment should be prepared. Where proposed species or proposed critical habitat also may be present, they should be addressed in the Biological Assessment.

The *IDOT Ecological and Natural Resources Manual* provides additional information and procedures to assist in fulfilling the requirements herein.

See Section 26-9 of the *BDE Manual* for details concerning the preparation of a biological assessment.

20-9.05(c) Processing of the Biological Assessment

The Biological Assessment will be coordinated with the FHWA and transmitted by BDE to the USFWS for review. The USFWS will respond in writing within 30 days on whether it concurs with the findings of the Biological Assessment.

If the Biological Assessment indicates the action is not likely to jeopardize the continued existence of proposed species or result in the destruction or adverse modification of proposed critical habitat and USFWS concurs, a conference is not required. If it is determined that the action is likely to jeopardize the continued existence of proposed species or result in the destruction or modification of proposed critical habitat, a conference is required.

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* Candidate species refers to any species being considered by the USFWS for listing as endangered or threatened but not yet formally proposed or listed. Candidate species are accorded no protection under the *Endangered Species Act*. Notification concerning each species is intended to alert agencies of potential proposals or listings. These species should be identified in the environmental report for a proposed undertaking. Also, close contact should be maintained with BDE on the disposition of the candidate species during the environmental processing of a project.

If the Biological Assessment indicates there are no listed species or critical habitat present that are likely to be adversely affected by the action and the USFWS concurs, formal consultation is not required. If listed species or critical habitat are present and it is determined they are likely to be adversely affected by the action, formal consultation is required.

If required, a written request will be made by BDE to the USFWS to initiate formal consultation.

Formal consultation will be directed toward further analysis of the species and/or critical habitat involved and alternatives to the proposed action. The purpose of these analyses is to allow the USFWS to develop its opinion concerning whether the action is likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat.

Formal consultation will be concluded within 90 days after its initiation unless a longer period is mutually agreed to. Within 45 days after concluding formal consultation, the USFWS will provide its Biological Opinion concluding that:

- the action is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat (a “jeopardy” biological opinion); or
- the action is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat (a “no-jeopardy” biological opinion).

If a “jeopardy” biological opinion is issued, the USFWS must be notified of the final decision on the action (i.e., whether the action will be modified and, if so, how).

If the final decision on the action will involve a likelihood of jeopardizing the continued existence of a listed species or resulting in the destruction or adverse modification of critical habitat, the action may not proceed (under Federal approvals or with Federal funds) unless, and until, an exemption from the requirements of Section 7(a)(2) of the *Endangered Species Act* (which directs Federal agencies to “ensure” that their actions are not likely to “jeopardize” listed species or destroy or adversely modify critical habitat) is obtained.

20-9.06 State Requirements

For additional information on State requirements, see Section 10-1.07.

20-9.06(a) Applicability

The pre-screening procedures discussed in Section 20-9.06(b) are applicable to all projects requiring submittal of an Environmental Survey Request pursuant to the criteria in Section 20-2. The procedures in the remainder of this Section are applicable to all projects.

20-9.06(b) Pre-Screening for Threatened and Endangered Species/Natural Areas

For projects affecting only agricultural cropland or urban properties developed for residential, commercial, or industrial purposes, an Agency Action Report (AAR) for threatened and endangered species/Natural Area compliance need not be submitted to IDNR. For all other projects meeting the applicability criteria in Section 20-2.01, BDE will submit an AAR to IDNR for pre-screening against the Natural Heritage Database. The AAR will indicate the location of the proposed project and will include a map delineating the project boundaries. Within 30 days of receipt of the AAR, IDNR will provide one of the following responses:

1. If no threatened or endangered species or Illinois Natural Area Inventory sites are known to occur and fieldwork is not recommended, IDNR will sign and date the AAR and return it to BDE. The Central BLRS will provide the signed AAR to the district if the comment field has information needed for project development and consultation is not closed. This will complete consultation for State threatened and endangered species/Natural Area requirements. If the project involves other resource concerns requiring further IDNR review, IDNR will re-screen the project against the Illinois Natural Heritage Database prior to any final action confirming satisfactory disposition of the other resource issues. The IDNR sign-off is valid for 3 years from the initial signature date on the AAR or from the date of final confirmation from IDNR on resolution of other resource concerns, if applicable. Before a project is advertised for a bid letting, the IDNR screening must be renewed if more than 3 years have elapsed since the last update on the screen or the project scope has changed. If the 3-year time period has elapsed, the local agency should request to update the AAR by sending a copy of the original AAR with appropriate attachments (i.e. topographic and/or GIS maps) to the district. The district will process the request similar to the procedures of an Environmental Survey Request. A copy of the renewed AAR with IDNR approval will be sent to the local agency through the district. See Chapter 18 for further guidance on the general principles of coordination with IDNR.

2. If listed threatened or endangered species or Illinois Natural Area Inventory sites are known to occur within the vicinity of the proposed action, IDNR will make the information regarding the resources available to BDE. IDNR also will provide recommendations on the need for further fieldwork, as applicable. BDE will initiate action to accomplish any additional fieldwork determined necessary. When completed, the Central BLRS will provide the results of the fieldwork, and the information from IDNR to the district. BDE also will provide a copy of the results of any additional fieldwork to IDNR. If IDNR recommend additional fieldwork and BDE determines that the additional studies were not needed, BDE will provide documentation to IDNR to explain the reasons for not accomplishing the studies.

20-9.07 Coordination of Federal/State Requirements

Where a species involved with an action is listed at both the Federal and State level, the Biological Assessment (Federal) and Detailed Action Report (State) prepared for the action will

be processed concurrently with the USFWS and IDNR, as practical. Although processing may be concurrent and the results of consultation may be considered by either agency, the Federal and State requirements are independent; both must be satisfied when species are on both the Federal and State lists.

20-10 EVALUATIONS OF FARMLAND CONVERSION IMPACTS

20-10.01 Introduction

In the development of a project, consideration must be given to the impacts that the action will cause in the conversion of farmland to non-farm uses. Under certain circumstances, coordination must be initiated with the US Department of Agriculture, Natural Resources Conservation Service (NRCS) and/or the Illinois Department of Agriculture (IDOA) to evaluate the impacts on farmland and obtain the views of those agencies on alternatives to the proposed action. This Section discusses the criteria and procedures for accomplishing the necessary coordination with NRCS and IDOA. Coordination is discussed in Section 10-1.08.

20-10.02 Legal Authority

The following legal authority regulates or influences the policies and procedures on farmland conversions:

- 7 USC 4201-4209, *Farmland Protection Policy Act of 1981* (Public Law 97-98).
- 7 CFR 658, Farmland Protection Policy.

See Appendix C of Part III "Environmental Procedures" of the *BDE Manual,* for more information.

20-10.03 Policy

In the development of a project, an evaluation is made of the action's effects on conversion of farmland to non-farm use. Coordination between NRCS and/or IDOA, as appropriate, is necessary to obtain their views on any anticipated farmland conversion. This evaluation and coordination with NRCS and IDOA is accomplished in conformance with Federal and State statutes, regulations, Executive Orders, and IDOT agreements concerning farmland. Consideration is given to alternatives that could reduce adverse impacts to farmland. Proposed actions are developed to be compatible with State and local governments and private programs and policies to protect farmland.

20-10.04 Definitions

The following definitions apply:

1. Farmland. Prime or unique farmlands, as defined in Section 1540(c)(1) of the *Farmland Protection Policy Act*, or farmland that is determined by the appropriate State or unit of local government agency or agencies with concurrence of the Secretary of Agriculture to be farmland of Statewide or local importance. "Farmland" does not include land already in or committed to urban development or water storage. Farmland "already in" urban

development or water storage includes all land with a density of 30 structures per 40 acre (16 per ha) area. Farmland already in urban development also includes lands identified as "urbanized area" (UA) on the Census Bureau Map, or as urban area mapped with a "tint overprint" on the USGS topographical maps, or as "urban-built-up" on the USDA Important Farmland Maps. Areas shown as white on the USDA Important Farmland maps are not "farmland" and, therefore, are not subject to the *Act*. Farmland "committed to urban development or water storage" includes all land that receives a combined score of 160 points or less from the land evaluation and site assessment criteria.

2. Site. The location that would be converted by the proposed action.

20-10.05 Federal Requirements

20-10.05(a) Applicability

A project that requires additional right-of-way outside any corporate limits must be coordinated with NRCS unless any one of the following applies:

1. None of the land to be acquired is prime farmland or farmland of Statewide or local importance.

2. The land to be acquired is in urban development (i.e., has a minimum current density of 30 structures (permanently affixed to the ground) per 40 acre (16 ha) tract).

3. The project is exclusively for widening and resurfacing and does not involve borrow areas, mitigation sites, or new alignment in which the right-of-way diverges from and is not contiguous to the existing right-of-way.

4. The project is within the official 1.5 mile (2.4 km) planning area of an incorporated municipality. To be an "official" planning area, the incorporated municipality must have an adopted comprehensive plan on file with the municipal clerk. If a district wishes to use the exemption for areas within an "official" planning area, the local agency must verify and document in the environmental information for the project that the municipality in question has adopted a comprehensive plan addressing the 1.5 mile (2.4 km) planning area and that the plan is on file with the municipal clerk.

5. The project is nonlinear (e.g., bridge or intersection improvements) and requires acquisition of no more than 10 acres (4 ha) of land. This threshold applies to nonlinear projects other than new rest areas and new truck weigh stations. All new rest area and truck weigh station projects must be coordinated with NRCS, regardless of the amount of acquisition involved. When the areas of right-of-way for the project approach the 10 acre (4 ha) threshold for coordination and the project will likely involve additional acquisition for borrow or mitigation, the project should be coordinated with NRCS. Anticipated sites for borrow and mitigation should be indicated if known.

6. The project is linear; requires acquisition of no more than 3 acres of land per project mile (0.75 ha of land per project kilometer) (area of acquisition divided by project length), and does not involve alternative alignment(s) in which the right-of-way diverges from, and is not contiguous to, the existing right-of-way. When the amount of right-of-way to be acquired approaches the 3 acres per project mile (0.75 ha per project kilometer) threshold for coordination and the project will likely involve additional acquisition for borrow or mitigation, the project should be coordinated with NRCS. Anticipated sites for borrow and mitigation should be indicated if known. For projects that include portions both within and outside of the official 1.5 mile (2.4 km) planning area of an incorporated municipality, the portions of the project within these planning areas should be excluded for purposes of computing the acres (hectares) of acquisition per mile (kilometer). If these projects are determined to require coordination, figures should be provided for the area of proposed acquisition and the length of the improvement both within and outside of the planning area. Only that portion of the project that is located outside of the official 1.5 mile (2.4 km) planning area will be subject to review and comment by NRCS. The information on the portion of the project within the official 1.5 mile (2.4 km) planning area is provided to NRCS for information only.

The categories of projects addressed by these items have been programmatically addressed in consultations with NRCS, and a general Form AD-1006 (see Section 20-10.05(c)) has been prepared for these actions. Further project-specific review by NRCS on these projects ordinarily will not be necessary. See Section 20-10.05(b) for further discussion of requirements for these types of actions.

If there is a question on whether any of the above conditions are met, contact the Central BLRS for a determination of applicability.

20-10.05(b) Procedures

The following will apply:

1. NRCS Coordination. For all projects requiring coordination with NRCS according to the criteria in Section 20-10.05(a), contact with NRCS should be made as early in the project development process as practical. The initial contact should be made with the State Office of the NRCS in Champaign. Form AD-1006 must be forwarded to the NRCS Office as part of the coordination process as soon as sufficient information is available. Coordination may be initiated prior to completion of the forms, as appropriate.

2. Minor Impacts. Where a project appears to be covered by Items 5 and 6 in Section 20-10.05(a), care should be taken to ensure that the project does not involve more than minor impacts on farmland and that there are no unusual circumstances that would make the criteria described inapplicable to the project. If more than minor impacts on farmland are involved or if unusual circumstances are present, coordination should be initiated with NRCS as discussed in Item 1 above.

If such impacts/circumstances are not involved, include documentation in the project file indicating the applicability of the criterion in Section 20-10.05(a) as the basis for not coordinating with NRCS. Also, include a copy of the general Form AD-1006 for these projects in the file. An appropriate paragraph similar to the following should be included in the Project Development Report or environmental report, as appropriate:

> *The impact of this project on farmland conversion has been evaluated in accordance with the requirements of the US Natural Resources Conservation Service (NRCS). The project will convert 3 acres or less of farmland per mile (0.75 ha or less of farmland per kilometer) and the conversion will not result in more than minor impacts. Accordingly, the project conforms to the general Form AD-1006 prepared by NRCS. Therefore, further coordination with NRCS on this project will not be necessary.*

20-10.05(c) Form AD-1006

The following will apply:

1. The local agency should complete Parts I and III of Form AD-1006 and submit it to the State NRCS office when information is submitted to IDOA in accordance with State farmland protection requirements; see Section 10-1.08. NRCS will complete Parts II, IV, and V and will then send the Form to IDOA for completion of the Site Assessment portions of the Form. When completed, IDOA will return the form to the local agency.

2. Form AD-1006 is the primary means of coordination with NRCS. It may, however, be supplemented with other information. It is recommended that a copy of the information sent to IDOA (see Section 20-10.06) be sent to NRCS with Form AD-1006. The additional information will help to expedite the review and minimize turnaround time. An informational copy of the completed AD-1006 form should be provided to IDOA when it is submitted to NRCS.

3. On new construction and reconstruction projects, early contacts with the local field offices and the Statewide office of NRCS are recommended. This will notify NRCS of the project and allow early comments while maximum flexibility still exists. Form AD-1006 may follow after the project development has determined the impacts. In this manner, substantive comments are discovered early and the potential for major changes in the later stages of project development will be reduced.

AD-1006 forms should not be sent to NRCS county field offices. AD-1006 forms for single and multi-county projects should be sent to the State NRCS office. See IDOT's website for the appropriate address.

20-10.05(d) Siting Requirements

Sites or alternatives with the highest combined scores, determined on Form AD-1006, should be regarded as most suitable for protection from conversion to non-farm use, and sites/alternatives with the lowest scores as least suitable for protection. Sites or alternatives receiving total scores of 175 or fewer points require only minimal consideration for protection from conversion, and no additional sites/alternatives need be evaluated. Sites or alternatives with scores of 176 to 225 points are in the moderate range for consideration of protection from conversion. At least one build alternative should be considered for these projects. Sites or alternatives receiving scores over 225 points should receive the highest priority for protection from conversion to non-farm uses. For these sites or alternatives, give consideration to other alternatives (e.g., rehabilitation of existing facilities, alignments that use lesser amounts of farmland).

The *Federal Farmland Protection Policy Act* (FPPA) regulations provide that:

> *If, after consideration of the adverse effects and suggested alternatives, the applicant wants to proceed with the conversion, the Federal agency may not, on the basis of the Act or these regulations, refuse to provide the requested assistance.*

Therefore, alternatives that adversely affect agriculture may be recommended, but only after full consideration of adverse effects and less damaging alternatives. The coordination with NRCS will ensure the adequacy of that consideration. The results of coordination with NRCS should be summarized in the environmental report or Project Development Report for the action.

20-10.05(e) Notification of Selected Alternative

NRCS requires that, when a Federally funded project has one or more alternatives that require acquisition of farmland subject to the FPPA and is not otherwise exempted from the requirement to submit Form AD-1006, the project agency should provide NRCS a copy of Form AD-1006 indicating the project alternative selected for implementation. Upon receiving design approval for projects, the local agency will inform the State NRCS office which alternative was selected for implementation. The local agency should use a copy of the previously coordinated Form AD-1006 for providing this notification. The local agency should complete the parts of the Form entitled “Site Selected” (enter appropriate site identification letter from the AD-1006) and “Date of Selection” (use design approval date) and should then send 1 copy to the State NRCS office. To aid NRCS in its record keeping, note on the top of the Form that it is a “Final Decision Notification.”

20-10.06 State Requirements

The results of the evaluations of farmland conversion impacts, mitigation measures, and associated coordination with IDOA should be summarized in the project’s environmental report

or Project Development Report, as appropriate. The results of coordination with IDOA should also be summarized in the environmental report or Project Development Report for the action.

See Section 10-1.08 for detailed information on the State's requirements for the evaluations of farmland conversions.

20-10.07 Relationship of Federal and State Requirements

Requirements for coordination with the NRCS, although similar to those for the Illinois Department of Agriculture (IDOA), are separate and distinct. Coordination with IDOA does not preclude the need to coordinate with NRCS. Projects that require coordination with NRCS will normally also require coordination with IDOA.

20-11 AIR QUALITY CONFORMITY DOCUMENTATION

20-11.01 Background

Section 176(c)(4) of the *Clean Air Act* Amendments of 1990 requires that transportation plans, programs, and projects that are funded or approved under Title 23 USC must conform to State or Federal air implementation plans. The implementation plans describe how air quality standards will be achieved. Conformity to an implementation plan is defined in the *Clean Air Act* as conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards. Federal activities may not cause or contribute to new violations of air quality standards, exacerbate existing violations, or interfere with the timely reduction of emissions as reflected in the State implementation plan. The implementing regulations for determining conformity of transportation projects (40 CFR Part 93, "Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded or Approved Under Title 23 USC or the *Federal Transit Act*") also impose requirements upon "regionally significant projects" in non-attainment areas regardless of whether those projects involve Federal funding or approvals.

Non-attainment areas are those areas of the country where air pollution levels persistently exceed the national ambient air quality standards.

"Regionally significant projects" means transportation projects (other than exempted projects) that are on facilities which serve regional transportation needs (e.g., access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls and sports complexes, transportation terminals), and would normally be included in the modeling of a metropolitan area's transportation network, including, at a minimum, all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel.

Illinois includes non-attainment areas in which standards are being exceeded for one or more of the air pollutants that the US Environmental Protection Agency (USEPA) has defined as "criteria pollutants" (e.g., Ozone (O_3), Carbon Monoxide (CO), Nitrogen Dioxide (NO_2)). The Illinois Environmental Protection Agency's (ILEPA) website (www.epa.state.il.us) has a complete list of non-attainment areas in Illinois under the Air Section.

20-11.02 Applicability

The following procedures are applicable to all highway projects funded or approved by the FHWA under Title 23 USC and to "regionally significant projects" in non-attainment areas, regardless of whether these projects are Federally funded or approved under Title 23.

20-11.03 Procedures

20-11.03(a) Determining Project Involvement with Designated Non-attainment Areas

In the preparation of environmental documentation for projects subject to these procedures, districts should review the most recent information from the Central Office of Planning and Programming regarding those areas of Illinois that have been designated as non-attainment for one or more of the criteria pollutants. If the proposed improvement is partially or completely within a designated non-attainment area it will be subject to the conformity requirements unless the type of work involved is exempted; see Section 20-11.03(c). USEPA rules do not currently require conformity determinations for projects outside of non-attainment areas (i.e., within attainment areas).

20-11.03(b) Determining Project Exemption from Conformity Requirements

The USEPA conformity rules for transportation projects exempt the project types listed below from the requirement for a conformity determination. The determination of whether a particular action is exempt from the conformity requirement, in most cases, is made during the development of the Transportation Improvement Program (TIP) prior to the initiation of project planning. Note that a particular project of a type listed is not exempt if the Metropolitan Planning Organization (MPO), in consultation with other agencies, EPA, and the FHWA, concurs that it has potentially adverse emissions impacts for any reason.

20-11.03(c) Exempt Projects

The following describes the types of projects considered exempt from air quality conformity documentation:

1. Safety. The following safety projects are exempt:

    - railroad/highway crossing;
    - hazard elimination program;
    - safer non-Federal-aid system roads;
    - shoulder improvements;
    - increasing sight distance;
    - safety improvement program;
    - traffic control devices and operating assistance other than signalization projects;
    - railroad/highway crossing warning devices;
    - guardrails, median barriers, crash cushions;
    - pavement resurfacing and/or rehabilitation;

- pavement marking demonstration;
- emergency relief;
- fencing;
- skid treatments;
- safety roadside rest areas;
- adding medians;
- truck-climbing lanes outside urbanized areas;
- lighting improvements;
- widening narrow pavements or reconstructing bridges with no additional travel lanes; and
- emergency truck pullovers.

2. Air Quality. Bicycle and pedestrian facility projects are exempt.

3. Other. The following are also considered exempt:

- specific activities that do not involve or lead directly to construction (e.g., planning and technical studies, Federal-aid systems revisions, planning activities conducted pursuant to 23 USC and 49 USC);
- engineering to assess social, economic, and environmental effects of a proposed action or alternatives to that action;
- noise attenuation;
- advance land acquisitions (23 CFR Part 712 or 23 CFR Part 771);
- acquisition of scenic easements;
- plantings, landscaping, etc.;
- sign removal;
- directional and informational signs;
- transportation enhancement activities (except rehabilitation and operation of historic transportation buildings, structures, or facilities); and/or
- repair of damage caused by natural disasters, civil unrest, or terrorist acts, except projects involving substantial functional, locational, or capacity changes.

4. Regional Emissions Analyses. The following projects are exempt from regional emissions analyses:

- intersection channelization projects;

- intersection signalization projects at individual intersections;
- interchange reconfiguration projects;
- changes in vertical and horizontal alignments; and
- truck size and weight inspection stations;

20-11.03(d) Determining Highway Project Conformity

The project conforms with the requirements of the *Clean Air Act* if the district confirms that the following statements are applicable to the action:

- The project was included in a conforming transportation plan and TIP.
- The project design concept and scope have not changed significantly from what was reflected in the conformity analysis for the plan and TIP.
- The project will comply with PM_{10} control measures in the State Implementation Plan. PM_{10} refers to particular matter measured in the ambient air with an aerodynamic diameter less than or equal to a nominal 10 micrometers.

Other criteria and procedures will apply for determining conformity of projects within CO or PM_{10} non-attainment areas. Districts should contact the Central BLRS for further guidance regarding these projects as the need arises.

To determine conformity for projects in non-attainment areas or maintenance areas outside of locations served by Metropolitan Planning Organizations (MPOs), the district should contact the Central BLRS and the Central Office of Planning and Programming to initiate a regional emissions analysis.

Projects must be found to conform before they are adopted, accepted, approved, or funded. Conformity must be redetermined if none of the following major steps has occurred within 3 years of the conformity determination — NEPA process completion; start of final design; acquisition of a significant portion of the right-of-way; or approval of the plans, specifications, and estimates. A new conformity determination also will be required if there is a significant change in project design concept and scope or if a supplemental environmental document for air quality purposes is initiated.

For further information on Project Conformity, see Section 26-11 of the *BDE Manual*.

20-11.03(e) Documentation

The environmental documentation for all projects subject to these procedures must include a statement regarding the status of the project with regard to the *Clean Air Act* conformity regulations (i.e., indicating that the project is outside of any designated non-attainment area or maintenance area; that the project is of a type exempted from conformity requirements; or that

the project has been determined to satisfy the conformity regulations). Section 26-11 of the *BDE Manual* provides example air quality conformity document statements for the following situations:

- projects outside of non-attainment areas or maintenance areas,
- exempt projects,
- projects within a portion of a non-attainment area or maintenance are for which the Chicago Area Transportation Study (CATS) is the MPO,
- projects within a non-attainment area or maintenance area served by a MPO other than CATS,
- projects within a non-attainment or maintenance area not served by a MPO, and
- "regionally significant" non-Federal projects within a non-attainment area or maintenance area.

20-11.04 Microscale Analysis

If the screening analysis indicates the project "fails" (i.e., that it has potential for contributing to a violation of the NAAQS for CO), or if the project does not fit the assumptions for use of the screening analysis, a detailed air quality analysis is required. The worst-case location and calculated 8 hour results of this analysis should be described, following the guidance in the *IDOT Air Quality Manual*. The latest USEPA Mobile model should be used for emissions factors. Comparison of these results to the National Ambient Air Quality Standards (NAAQS) for CO shall determine whether the project supports the maintenance of the CO NAAQS in Illinois. Analysis results below the 8 hour CO NAAQS (less than 9 ppm) will indicate no impacts present to the local atmospheric conditions that are necessary to protect the public health and welfare. Analysis results above the 8 hour CO NAAQS will indicate impacts present, which will require mitigation measures to be discussed with the FHWA, USEPA, and IEPA. Any mitigation measures should be described in the EA or EIS.

A determination must be made as to whether the highway project is located wholly or partially in a portion of the State classified by the USEPA as a non-attainment area for any of the six criteria pollutants (40 CFR Part 81). This determination should be made and documented in accordance with the procedures in Section 26-11 of the *BDE Manual*.

See BDE Procedure Memorandum 37-03 for more details on this type of analysis.

20-12 SPECIAL WASTE

20-12.01 Comprehensive, Environmental Response, Compensation, and Liability (CERCLIS)

Through an arrangement with the Illinois Environmental Protection Agency (IEPA), IDOT receives regular updates of the Comprehensive Environmental Response, Compensation, and Liability Information system (CERCLIS) site listing for Illinois. This listing, which is maintained by the US Environmental Protection Agency (EPA), is an inventory of sites that reportedly have unlawfully accepted and stored hazardous substances, or that have a record of accidental spillage or illegal dumping. CERCLIS provides information on the types of contaminants involved at these sites. Furthermore, the CERCLIS list may indicate the business address of a company that reportedly owns a potential problem site. That address may not be the actual location for the waste activity.

If no listed sites are in proximity to the project, the following paragraph should be included in the project file, the Project Development Report, or environmental report:

> *The USEPA listing of potential, suspected, and known hazardous waste or hazardous substance sites in Illinois (i.e., the Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) list) has been reviewed to ascertain whether the proposed project will involve any listed site(s). As a result of this review, it has been determined that the proposed undertaking will not require any right-of-way or easement from any site included in the CERCLIS listing as of* (date of most recent CERCLIS listing provided to the district).

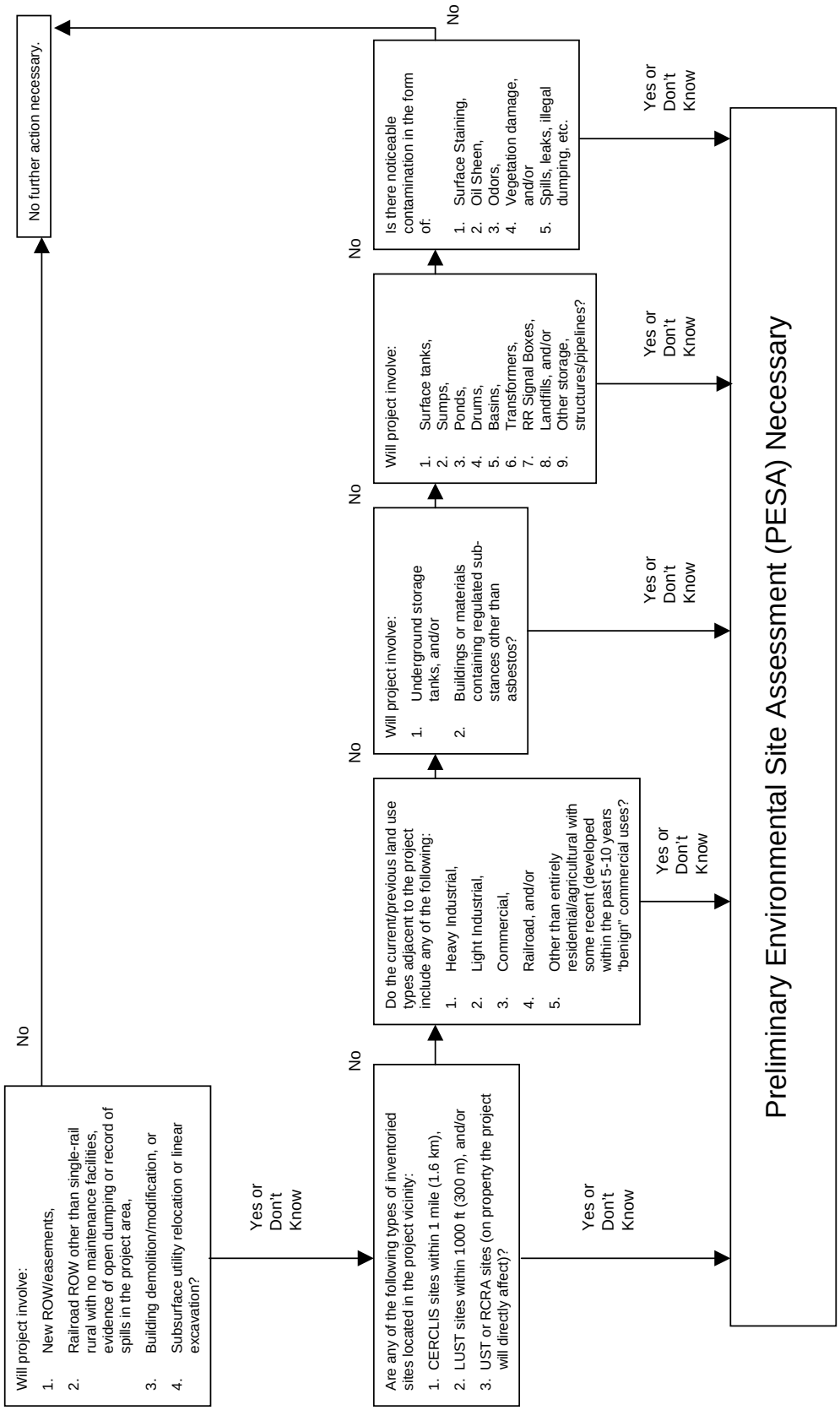
The following Sections discuss the procedures for projects that include a site that is listed on CERCLIS.

20-12.02 Applicability

These procedures apply to all local agency Federal- and State-funded projects, and are recommended for MFT-funded projects.

20-12.03 Special Waste Screening

The local agency must screen all projects on the local highway system in order to determine whether they require further documentation for special waste contamination on sites otherwise potentially impacted by regulated substances. Follow the Special Waste Assessment (SWA) Screening Criteria shown on Figure 20-12A. The screening process applies criteria for determining a project's potential involvement with special waste and other regulated substances



SPECIAL WASTE ASSESSMENT SCREENING CRITERIA

Figure 20-12A

and leads to a determination whether or not further action is necessary. BDE will screen local projects requiring right-of-way in the name of the State or if IDOT is preparing plans for the local agency.

When a project requires right-of-way in the name of the State or if IDOT is preparing plans for the local agency, check the special waste box on the Environmental Survey Request (ESR) and notify the district that this property is located within the local agency's project limits. The district will ensure that the special waste box is checked on the Project Monitoring Application (PMA). The district's Special Waste Coordinator (SWC) will screen these types of projects. The SWC will also complete the information on the special waste screen on the ESR and place it in the Project Monitoring Application (PMA).

If the project does not require right-of-way in the name of the State and IDOT is not preparing the plans, do not check the special waste box or complete the special waste screen on the ESR.

20-12.03(a) No Further Assessment Determined Necessary

The local agency will not need to take further action if completion of the SWA screening results determines that:

1. The project does not involve any of the following:

    a. new right-of-way or easements,

    b. railroad right-of-way other than single rail rural with no maintenance facilities,

    c. evidence of open dumping or record of spills in the project area,

    d. building demolition/modification,

    e. linear excavation, or

    f. subsurface utility relocation.

2. The project may involve one or more of the aforementioned factors, but the local agency determines that both of the following apply:

    - No listed CERLIS sites are within 1 mile (1.6 km) of the project; no listed Leaking Underground Storage Tank (LUST) sites are within 1000 ft (300 m) of the project; and no listed Underground Storage Tanks (UST) or *Resource Conservation and Recovery Act* (RCRA) facilities are located on properties the project will directly affect. The UST includes the tank, all piping, and any part of an UST system that contains product. By definition, any system having 10% of the total tank volume below ground is considered to be a UST.

    - The project area is entirely agricultural/residential or agricultural/residential with some recent (developed within the last 5 to 10 years) "benign" commercial and industrial uses (i.e., uses not covered by Figures 20-12B and 20-12C, and all of

the items listed in the “visual inspection” section of the SWA screening warrant a “No” response).

Indicate in the environmental document or Project Development Report that the application of the screening criteria did not indicate potential for special waste or other regulated substance contamination warranting further investigation.

20-12.03(b) Preliminary Environmental Site Assessment (PESA)

If application of the SWA screening procedure leads to a determination that further action is required, a PESA will be necessary.

The purpose of a PESA is to determine the environmental condition of a site prior to the acquisition of right-of-way or improvements to existing right-of-way.

Use *A Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation Highway Projects* or ASTM E1527 as a guide for preparing a PESA. Copies of the *Manual* may be obtained from the Illinois State Geological Survey. The ASTM Specification can be found on the ASTM website.

Risk Level	Potential Land Use	Comments
A	car washes	Possible UST's.
A	grain elevators	Possible UST's and old sites used Carbon Tetrachloride as a fumigant
A	lumber yards/hardware/general stores	Possible UST's
A	photolabs (small, modern one-hour photo places pose minimal hazards as do places which send out pictures)	Possible heavy metals (mainly silver)
A	public utilities (e.g., gas, phone, cable, power)	Possible UST's
A	rent-all shops	Old sites where UST's are suspected would change risk to "B"
B	airport/hangars	Possible UST's, pesticides if crop dusting
B	areas where pesticide-carrying vehicles (tankers or farm application equipment)	Possible pesticides/herbicides, fertilizers
B	auto paint centers at department stores	Possible solvents (paint thinners)
B	auto paint shops/radiator shops	Possible solvents, paint thinners, waste automotive fluids
B	auto repair shops with or without waste oil UST's	Possible UST's, waste oils, fluid disposal
B	boat builders/repairers/restorers	Possible lead from keel work
B	car dealerships	Possible UST's waste fluid disposal
B	construction equipment/farm dealers, storage or servicing	Possible UST's
B	crop dusting facilities (public or private) (storage/mixing areas, plane parking areas)	Possible UST's, possible pesticides
B	exterminators and pest-control operations	Possible UST's, possible pesticides
B	fairgrounds	Possible UST's
B	farm co-ops/bulk agricultural chemical depots	Possible UST's, possible pesticides, herbicides, agricultural chemicals
B	farmsteads	Possible UST's
B	fleet-maintaining facility, especially trucking depots, cab services, and rental car agencies	Possible UST's
B	funeral homes	Possible UST's
B	furniture restorers/strippers	Used solvents

Risk Levels
A - Nothing generally expected
B - Potential exists
C - Likely or highly probable

COMMERCIAL SITES RECENTLY DEVELOPED
(Within Last 5 to 10 Years) (Potentially Non-Benign)

Figure 20-12B

Risk Level	Potential Land Use	Comments
B	golf courses	Possible UST's
B	government offices (fire, police, ambulance, forest preserves, parks, conservation offices)	Possible UST's
B	greenhouses and (especially) nurseries	Possible UST's
B	hydraulic fluid/equipment supplier	Possible PCB's, spent fluid
B	hydroelectric plant sites (and former ones)	Lubricating oils for turbines, possible UST's for heating oil
B	landscaper/lawn care spraying operations	Possible UST's, herbicides
B	large composting or yard waste operations	Possible concentrated household agricultural chemicals
B	large private farm complexes that keep a stock of agricultural chemicals on-hand	Possible UST's, agricultural chemicals
B	mines and mining operations	Possible heavy metals and acid drainage
B	newspaper distributors	Possible UST's
B	newspaper graphic arts and painting shops	Possible solvents, heavy metals (from ink)
B	oil change shops	Possible UST's, waste fluids
B	post offices/Federal Ex/UPS depots	Possible UST's
B	railroad offices of signal yards	Possible spills, possible UST's for heating oil
B	school bus yards	Possible UST's
B	schools/colleges/churches/nursing homes/hospitals	Possible UST's
B	services/dairies/bakeries	Possible UST's
B	sign advertising material producers	Possible heavy metals
B	sites which may own small substations	Possible PCB's
B	soft drink/beer bottlers/food distributors, diaper/linen	Possible UST's
B	state/county/township/local highway department yard	Possible UST's
B	toll plazas	Possible UST's
B	transit barns, bus depots	Possible UST's

Risk Levels
A - Nothing generally expected
B - Potential exists
C - Likely or highly probable

COMMERCIAL SITES RECENTLY DEVELOPED
(Within Last 5 to 10 Years) (Potentially Non-Benign)
(Continued)

Figure 20-12B

Risk Level	Potential Land Use	Comments
B	underground oil/gas storage caverns	Possible oil leakage spills
C	auto wrecking yards/junkyards/metal scrap yards	Possibly heavy metals, waste fluids
C	bulk petroleum distributors/refineries	Possible UST's, spills
C	commercial laundries/linen services with cleaning plants on-site (also leather and fur cleaning)	Dry cleaning chemicals (may be in UST's) typically perchlorothylene (a.k.a. tetra-chloroethylene
C	deposition sites/landfills for sludge from industrial wastewater, treated human sewage, or ash from municipal solid waste	Possible heavy metals
C	drum or tank recyclers	Possible waste fluids, solvents
C	dry cleaners	Dry cleaning chemicals (may be in UST's) typically perchlorothylene (a.k.a. tetra-chloroethylene)
C	gasoline stations (former) (past ones may not be on UST list)	Possible UST's
C	gasoline stations (present) (also all sites on the UST/LUST lists)	Possible UST's
C	landfills	Possibly anything
C	military armories/garages/any military installation	Possible UST's
C	oil recyclers	Possible leaks, spills, UST's
C	power substations	Risk reduced to "A" if PCB's are not suspected
C	radio transmitters	Risk reduced to "A" if PCB's are not suspected
C	railroad right-of-way yards	Possible UST's, spills, solvents
C	wood preserving operations	Various VOC's, heavy metals

Risk Levels
A - Nothing generally expected
B - Potential exists
C - Likely or highly probable

COMMERCIAL SITES RECENTLY DEVELOPED
(Within Last 5 to 10 Years) (Potentially Non-Benign)
(Continued)

Figure 20-12B

Risk Level	Potential Land Use	Comments
B	any industry that may have bulk lubricants/fuel oil on-site	
B	battery manufacturers or recyclers	
B	pharmaceutical producers	
C	asphalt producers/paving companies/roofing tar operations	
C	coal gasification plants	
C	electronics manufacturers	
C	glass, mirror, and ceramics manufacturing	
C	heat exchanger manufacturers or any sites with older heat exchangers (operational or not)	
C	iron and steel manufacturing or smelters	
C	leather produce manufacturing/tanning	
C	manufacturers of agricultural chemicals (also warehouses)	
C	metal fabrication/metal plating/tool die/machine shops (numerous degreasing solvents)	
C	metal forming, finishing, polishing operations	
C	paint or adhesive manufacturers/warehouses/ painting contractors	
C	paper mills	
C	petrochemical plants, warehouses	
C	rubber or tire manufacturers	
C	synthetic fiber manufacturing	
C	textile mills and dying operations	
C	transformer manufacturers	

Risk Levels
A - Nothing generally expected
B - Potential exists
C - Likely or highly probable

INDUSTRIAL SITES
(Sites Cannot be Screened Out)

Figure 20-12C

20-12.03(c) PESA Risk Findings

The following procedures apply:

1. Definitions

   a. "No Risk" Finding. After a review of all available information, there is no indication of the presence of regulated substances or involvement with natural hazards in the project area.

   b. "Low-Risk" Finding. Current or former land use may include a facility that treats, stores, disposes of, transports, or is otherwise involved with regulated substances. The project may be located on a floodplain or have geologic materials conducive to movement during seismic activity. However, based on all available information, there is no reason to believe there would be any involvement with regulated substances of significant quantity. This is the lowest possible rating a gasoline station operating within current regulations could receive.

   c. "Moderate Risk" Finding. After a review of all available information, indications are found that identify a potential for soil or water contamination or other environmental hazard. However, the hazard was not verified by local agency testing. The area could have a long history of industrial or commercial use, or a CERCLIS or LUST site may be present along the project's right-of-way. This is the lowest possible rating if anticipated construction intersects an UST site.

   d. "High-Risk" Finding. A high risk is based on the presence of potentially hazardous compounds, either as detected by local agency testing or as documented by the IEPA. The specific presence and levels of regulated substances, to the extent that they are known, will be incorporated in the report. Further investigation may be needed to determine the nature, source, and extent of the problem.

2. Procedures for Risk Findings. The following describes the PESA risk findings:

   a. "No Risk" or "Low Risk" Finding. If the final PESA report indicates that the project is "No Risk" or "Low Risk" for sites potentially impacted with regulated substances, document this finding in the environment document or Project Development Report for the project. The documentation should include a copy of the final PESA report's risk finding. No further action is necessary regarding sites potentially impacted with regulated substances unless a reevaluation for special wastes become necessary under the Validation of Special Waste Assessment Results, see Section 20-12.07, or if a previously unidentified site is encountered. If another site is encountered, work affecting the site should immediately cease until the local agency has assessed the situation and determined an appropriate course of action.

b. "Moderate Risk" or "High Risk" Finding. If the PESA results in a determination that the project is "moderate risk" or "high risk" for special waste or other sites potentially impacted with regulated substances, determine conditions for reducing the risk to an acceptable level through means of avoidance.

3. Avoidance of Contaminated Site Possible. If it is determined that the project can avoid the contaminated site, indicate it in the environmental document or Project Development Report. Avoidance of the site may be a horizontal or vertical change in alignment so that the local agency does not acquire the contaminated site, or a part that is contaminated or impacts it during construction. No further action is necessary regarding sites potentially impacted with regulated substances unless a reevaluation for special wastes becomes necessary under the Validation of Special Waste Assessment Results, see Section 20-12.07, or if a previously unidentified site is encountered during construction. If another site is encountered, work affecting the site should immediately cease until the local agency has assessed the situation and determined an appropriate course of action.

4. Avoidance of Contaminated Site Not Possible. If it is determined that the project cannot conform to the avoidance of the contaminated site, prepare a Preliminary Site Investigation (PSI) with a qualified consultant or personnel. The PSI will determine the nature and extent of contamination (i.e., above or below the clean-up objectives). BDE maintains a list of approved qualified consultants for PSI's, which is available upon request. The PSI should include the following:

- a location map with the areas impacted by special waste or regulated substances identified on the map;
- a list of recommended actions to be taken;
- cost estimates to excavate, transport, and dispose of the contaminated material;
- results of field investigations of each affected site, including boring logs, a summary of analytical results, and laboratory data, if applicable; and
- a special provision for managing the contamination including pay items and quantities.

Send a copy of the PSI to the IEPA if a LUST or Site Remediation Program (SRP) site is investigated and results exceed Tiered Approach to Corrective Action Objectives (TACO) levels. Send a copy of the PSI to the Office of State Fire Marshall (OSFM) if the site investigated is on the UST list and exceed TACO levels.

20-12.04 Special Waste on State Property

If special waste is located on property that is held or will be acquired in the name of the State or if the contract plans will be prepared by IDOT, IDOT will be responsible for the preparation of the PESA and a preliminary site investigation. Check the box on the special waste screen on

the ESR and notify the district that this project is located within the local agency's property limits. The local agency must prepare three sets of exhibits showing proposed right-of-way and easements highlighted, along with the length, width, and depth of the proposed excavation and attach a copy to the ESR. The district will forward the special waste portion of the ESR to the SWC. The district SWC will ensure that the special waste box is checked on the PMA.

The district SWC completes the information on the special waste screen on the ESR, enters it into the PMA, and submits the packet to BDE for processing. Upon receipt of the final PESA, the district SWC notifies the local agency of the findings and waits for a response to the depth stipulation. The depth stipulation is the depth determined to be acceptable to excavate.

If the depth stipulations are exceeded in existing or proposed right-of-way or easement, the BDE will contact the Statewide Special Waste Investigation Consultant and request a work plan and estimated budget for the PSI.

If the local agency performs work on property in the name of the State, but is not acquiring the property, the local agency would be responsible for all activity necessary to comply with all applicable laws and regulations that may pertain to the performance of the project work. The district SWC must be made aware of this type of work in order to refer to any Tiered — Approach to Corrective Action Objectives (TACO) agreements, see Section 20-12.09, and to ensure that any Underground Storage Task (UST) owner/operate is notified.

20-12.05 Relationship of Special Waste Process Results to Design Approval

Categorical exclusion concurrence and design approval for Federally funded projects may be given at the request of the local agency when results of the special waste process support one of the following determinations:

1. Application of the SWA screening criteria resulted in a finding that the project has no potential for involving special waste sites or other sites impacted with regulated substances.

2. The PESA has resulted in a finding that the project is "no risk" or "low risk" for involvement with special waste sites or other sites impacted with regulated substances.

3. The PESA has resulted in a finding that the project is "moderate risk" or "high risk" for involvement with special wastes sites or other sites impacted with regulated substances and the local agency has determined that it can avoid the site. The request for design approval must include a copy of the PESA report and the local agency's determination that the site can be avoided. The information regarding the avoidance determination must be included in the commitment file for the project to ensure follow-through in subsequent stages of project development and implementation.

4. The PESA resulted in a finding that the project is "moderate risk" or "high risk" for involvement with special waste sites or other sites impacted with regulated substances, and the local agency cannot avoid the site and:

- the nature and extent of the involvement is known;
- the cost of addressing the site is known, based on the results of the PSI or subsequent studies or assessments, as needed;
- the local agency has determined that the above cost is acceptable; and
- the areas of contamination will be managed and disposed of in accordance with all applicable State and Federal regulations.

The request for design approval must include documentation of the local agency's determination that the cost involved in addressing the site is acceptable. When the proposed project is on existing alignment or involves only a single alignment alternative, the local agency may request design approval prior to receiving the results of the PSI. In response to this request, the Central BLRS may give design approval subject to the condition that the local agency may not acquire any contaminated parcel until the PSI, and subsequent studies if needed, have been completed. The local agency must reflect in the project commitment file, the requirement for completing the PSI and other related studies, if needed, prior to commencing acquisition of any contaminated parcel and must ensure completion of the commitment. Prior to initiation of the PSI, the local agency should re-screen the project to evaluate whether anything has changed in the project area that would affect the results of the PESA and should update the PESA as necessary.

5. The only sites potentially involved with the project and potentially impacted with regulated substances are Underground Storage Tanks (UST's) or Leaking Underground Storage Tanks (LUST's), and the BDE Geologic and Waste Assessment Unit has waived waiting for the results of further investigations prior to design approval. This waiver may be requested on the basis of the interim PESA report or letter report, the final PESA report, or the PSI report. This waiver will not be given when the UST's/LUST's will be acquired or if the local agency proposes to acquire the entire property containing the UST's/LUST's. The request for design approval must include a copy of the waiver from BDE Geologic and Waste Assessment Unit.

If the special waste is located on property that is held or will be acquired in the name of the State or if contract plans will be prepared by IDOT, the local agency may submit a request to the district for design approval before the special waste procedures are completed. The district will coordinate the request with the district SWC. The waiver request will be submitted to BDE by the district SWC. The district will also ensure that Central BLRS is aware of this submittal. The district SWC will inform the district whether or not the waiver has been approved.

If the special waste is located on property that is held or will be acquired in the name of the local agency, the local agency may submit a request to the district for design approval before the special waste procedures are completed if one of the determinations stated above apply. The request will be given via a special waste waiver. The waiver request will be submitted to Central BLRS.

20-12.06 Relationship of Special Waste Process Results to Contract Letting

The local agency will be required to complete the PSI, when applicable, and perform all commitments made in the Project Development Report or environmental document prior to inclusion on a letting. The local agency will provide the district with written notification that all required work for the special waste studies has been completed.

20-12.07 Validity of Special Waste Assessment Results

If significant changes in land use, or more than 18 months and less than 3 years have elapsed since the last examination of a project for special waste/regulated substance contamination (i.e., local agency screening/sign-off or PESA), the local agency must validate the examination results before proceeding with arrangements for further special waste/regulated substance investigations before submitting the Project Development Report or environmental document for approval, if required, or before initiating land acquisition. The validation review should include a check of the database; see Section 20-12.08, for new reported releases and new land uses of potential concern. If changes are identified, a PESA should be conducted to evaluate the new reported release(s) and/or new potential land use concern(s).
If 3 years or more have elapsed since the last examination for special waste/regulated substance contamination, local agency screening and sign-off or PESA, the entire project should be reevaluated as a new action prior to proceeding with arrangements for further special waste/regulated substance investigations, before submitting for approval, or before initiating land acquisition. If a project was initially screened and cleared by the local agency, the reevaluation after 3 years may again consist of local agency screening and clearance provided no changes have occurred in the project area that would alter the findings upon which the original clearance was based.

If a PSI was conducted for a project and 5 years or more have elapsed since it was completed, the entire project should be evaluated for regulated substances as a new action and a new PESA must be conducted prior to proceeding with the aforementioned project actions.

When validation of the results of special waste/regulated substance evaluations is necessary, the review should consider any changes in the proposed action, the affected environment, anticipated special waste/regulated substance involvement, and proposed measures for addressing the special waste/regulated substance.

20-12.08 Resources

The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) list can be found on the EPA website. The Environmental Protection Agency's current list of Leaking Underground Storage Tanks (LUST) can be found on the Illinois EPA website. The list of LUST sites is an unconfirmed list and should not be used as a final determination regarding whether releases have occurred at sites on the list.

If a project involves a property on which the existence of an UST is suspected and does not appear on the list, contact the State Fire Marshal's office to check the most current registrations. The *Standard Specifications for Road and Bridge Construction* also contains guidance on proper procedures for UST removal.

20-12.09 Tiered Approach to Corrective Action Objectives (TACO) Agreements

Illinois environmental law requires the Illinois Pollution Control Board to consider land use controls in determining risk to human health from contamination in soil and groundwater. This approach is known as the Tiered Approach to Corrective Action Objectives (TACO). The TACO regulations recognize highway authority agreements as a land-use control. In the agreement, the highway authority is responsible for the following commitments:

- Prohibit the use of groundwater under the highway right-of-way that is contaminated above residential Tier 1 remediation objectives from the release as a potable supply of water.
- Limit access to soil contamination under the highway right-of-way that is contaminated above residential Tier 1 remediation objectives from the release. Access to soil contamination may be allowed if during and after any access, public health, and the environment are protected.

For a highway authority willing to make these commitments, there are a number of significant benefits. These include:

1. Notification. The company is required, for the first time, to notify the agency that it has contaminated the right-of-way and to take responsibility. Before TACO, the oil company was allowed to leave the contamination beneath the agency's road as "impractical" to deal with. The agency would not necessarily be aware of the contamination. Although these agreements could cover nearly any type of pollutant, all of IDOT's agreement to date involves petroleum contamination.

2. Release. The agreement party agrees to define, indemnify, and hold harmless the State and other highway authority, if any, maintaining responsibility for contaminants in the highway right-of-way by an agreement with IDOT (and other highway authorities) and their agents, contractors, or employees for all obligations asserted against or costs incurred by them, including reasonable attorney's fees and court costs, associated with the release of contaminants from the site, regardless whether obligations or costs were caused by their negligence, but not gross negligence.

3. Reimbursement. The party agrees to reimburse the highway authority for the reasonable cost it has incurred in protecting human health and the environment including, but not limited to, identifying investigation, handling, storing, and disposing of contaminated soil and groundwater in the right-of-way as a result of the release of contaminants at a site.

A company that has contaminated the right-of-way has two choices:

- It can clean up the right-of-way.
- It can negotiate a Highway Authority Agreement that is acceptable to the local agency and/or State.

The appropriate rule for TACO can be downloaded from the IPCB website.

20-13 REFERENCES

1. 23 CFR 771, "Environmental Impact and Related Procedures."

2. FHWA Technical Advisory T6640.8A, "Guidance for Preparing and Processing Environmental and Section 4(f) Documents."

3. Section 4(f) Background/Questions and Answers, 49 USC 303.

4. Executive Order 11988, "Flood Plain Management."

5. Executive Order 11990, "Protection of Wetlands."

6. *Federal Endangered Species Act*, 50 CFR 402.

7. *Farmland Protection Act of 1981*, 7 USC-4201-4209.

8. "Farmland Protection Policy," 7 CFR 658.

9. Part III "Environmental Procedures," *Illinois Bureau of Design and Environment Manual*, IDOT.